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The Influence of Arab Culture on Arab Military Effectiveness

by

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## ABSTRACT

This thesis attempts to answer the question “why have Arab armed forces fared so poorly in combat since 1945?” In particular, it focuses on the impact of behavior derived from the dominant Arab culture as an explanation for this pattern of ineffectiveness. It compares this cultural explanation to alternative theories that purport to explain the same phenomenon. Specifically, it compares the influence of Arab culture on Arab military effectiveness to that of underdevelopment, the politicization of Arab militaries, and their frequent reliance on a Soviet-model of military operations.

This thesis employs case studies of the military effectiveness of the armies and air forces of Egypt, Iraq, Jordan, Saudi Arabia and Syria between 1945 and 1991. It examines the performance of these Arab militaries in the 1948 War of Israeli Independence, the 1956 Sinai-Suez war, the Iraqi campaigns against the Kurds in 1961-1970 and 1974-1975, the Yemeni Civil War of 1962-1967, the 1967 Six-Day war, the War of Attrition of 1968-1970, Black September and the 1970 Syrian Invasion of Jordan, the 1973 October War, the 1976 Syrian Invasion of Lebanon, the Iran-Iraq war 1980-1988, the 1982 Israeli Invasion of Lebanon, and the Persian Gulf war of 1990-1991.

This thesis conducts a series of tests to ascertain the explanatory power of the Arab-culture theory, both in isolation and relative to that of the alternative explanations. In particular, it compares Arab military effectiveness to that of Angola, Argentina, Chad, China, Cuba, Ethiopia, India, Iran, North and South Korea, Somalia, and Vietnam as a means of establishing the relative influence of the various explanations for limited Arab military effectiveness. It concludes that patterns of behavior derived from the dominant Arab culture are probably the most important of a range of factors that contributed to poor Arab performances in combat. It concludes that underdevelopment also played an important role in Arab military effectiveness, while politicization had a lesser influence. Finally, it concludes that Soviet influence on Arab military operations was not a factor contributing to Arab defeat.



## Acknowledgments

Clearly, an effort of this magnitude could not be the labor of only one person, and this dissertation owes much to a great many people. First and foremost among these was Barry Posen, whose insights into Arab military operations were a constant aid and whose ideals of scholarship were a constant challenge. Without his guidance and exacting standards, this thesis would have amounted to very little. Stephen Van Evera deserves all of the credit for turning an inchoate mass of assertions, assumptions, and abstractions into a reasonable approximation of social science. Myron Weiner and Ali Banuazizi provided invaluable assistance in steering me through the shoals of Middle East sociology and political development, neither of which could I have navigated on my own. In addition, they have my thanks for forcing me to come to grips with the need for sensitivity when treating so controversial a topic as culture. Ben Bonk, Jack Duggan, Bruce Pease, and Winston Wiley at CIA, and Phil Ferguson at DIA have my eternal gratitude for seeing this tome through the Byzantine government review process. Jeanne Washington of the Department of Political Science at MIT also has my thanks for her help with all of the “administrivia” involved in completing a doctoral dissertation.

I was able to conduct nearly 100 interviews for this thesis and would like to thank those who consented to be interviewed. Unfortunately, the vast majority were US military and intelligence personnel and Israeli military officers, all of whom agreed to unclassified interviews only on condition of anonymity. Nevertheless, their contributions were greatly appreciated and much of what is valuable in this study must be credited to their willingness to pass on their experiences and insights. Sam Huntington allowed me to pick his brain about industrial development and military effectiveness, and his thoughts formed the basis for much of Chapter 5. Finally, Lt. General Bernard Trainor granted me over six hours of interviews on the various wars in which he has been a participant or an observer. His generosity with his time breathed life into episodes of military history that I otherwise would have known only from the printed page.

A number of friends and advisers also deserve thanks for reading various drafts or sections of this thesis as it evolved over time, including Lisa Anderson, Dan Byman, Mike Desch, Gene Lodge, Hank Malcom, Ben Miller, Ed Pendleton, Daryl Press, Steve Rosen, James Rossberg, Brent Sterling, Brian Taylor, and Steve Ward. They provided more good advice and criticism than I deserve. Of course, any foolish mistakes or outrageous opinions are my own.

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### **A Note on the Maps**

All of the maps contained in this dissertation were created by Kenneth M. Pollack using a variety of Macintosh<sup>©</sup> graphics programs. The vast majority of the maps were copied freehand using MacPaint<sup>©</sup> to create a base map with the coastline, political boundaries, topography, rivers, major cities, and major roads. This map was then exported to a MacDraw<sup>©</sup> program at which point, place names and military symbols were added. For a handful of maps, I started by creating a base with only the coastlines and political boundaries using the BaseMap<sup>©</sup> program for Macintosh<sup>©</sup>, which I then exported to MacDraw and from there back to MacPaint<sup>©</sup> to lay in the other features of the base map before re-exporting this map to MacDraw<sup>©</sup> for the addition of the military symbols and place names.

### **A Note on Transliteration of Arabic Names to English**

Since no standardized system of translating Arabic names into English exists, I have allowed the understanding of the reader to be my guide. In cases where English-speaking readers would be familiar with a particular transliteration of an Arabic name, I went with that rendering. Hence I refer to “Gamal ‘abd al-Nasser,” rather than “Jamaal ‘abd an-Nasr,” and to the “Bekaa valley” of Lebanon, rather than the “Biq’a.” On the other hand, when Arabic names were sufficiently obscure that I felt an English-speaking reader familiar with some aspects of the Arab world--or of Arab military history--would not immediately recognize a particular spelling, I used what I felt was the more proper rendering in Arabic. Thus, I refer to “al-Qunaytarah” rather than the older “Kuneitra” and to “Isma’il ‘Ali” rather than “Ismail Ali.”

## Table of Contents

<b>Chapter 1. Questions, Methods and Organization.....</b>	<b>21</b>
Judging the Influence of Culture vs. Judging Culture .....	23
The Existing Literature .....	24
Methodology .....	26
Summary of Organization and Findings .....	28
<b>Part I. The Theories .....</b>	<b>35</b>
<b>Chapter 2. A Theory of the Influence of Arab Culture on Arab Military Effectiveness .....</b>	<b>37</b>
Definitions.....	37
Culture.....	37
Military Effectiveness .....	40
Arab Culture and the Arab World.....	40
Some Caveats Pertaining to my Treatment of the Dominant Arab Culture.....	42
Methodology Used to Derive the Independent Variable .....	44
Characteristics of the Dominant Arab Culture.....	48
Conformity and Creativity .....	48
Centralization of Authority .....	51
Deference to Authority.....	54
Group Loyalty .....	56
Manipulation of Information.....	58
Atomization of Knowledge .....	60
Personal Courage .....	61
Aversion to Manual Labor and Technical Work .....	62
Hypotheses and Predictions of the Theory .....	65
Creativity and Innovation.....	66
Information Flows.....	67
Initiative .....	67
Centralization of Authority .....	67
Maneuver .....	67
Employment of Armor .....	68
Employment of Artillery .....	68
Air-to-Air Combat.....	69
Air-to-Ground Operations .....	69
Ad Hoc vs. Set-Piece Operations .....	70
Combined Arms Operations.....	71
Unit and Service Coordination.....	71
Unit Cohesion .....	71
Personal Bravery .....	73
Operational Readiness.....	73
Employment of Machinery and Technology .....	73
Logistics .....	73

Combat Engineering .....	74
Technical Support of the Military .....	74
Intelligence and Operational Security .....	74
Additional Predications of the Theory .....	75
Tactical Leadership .....	75
Congruence Across the Entire Arab World .....	78
Mobile Armored Warfare.....	78
Static Defensive Operations .....	78
A Final Prediction: The Transmission Mechanism.....	80
The Broad Predictions of the Theory .....	81
<b>A Theory of the Influence of Politicization of Arab Militaries on Arab</b>	
<b>Military Effectiveness .....</b>	<b>83</b>
Three Flavors of Politicization.....	85
Commissarism.....	86
The Effects of Commissarism on Military Effectiveness .....	88
<i>Centralization of Authority</i> .....	89
<i>Initiative</i> .....	89
<i>Passivity of Enlisted Personnel</i> .....	89
<i>Generalship</i> .....	90
<i>Innovation and Creativity</i> .....	90
<i>Maneuver</i> .....	90
<i>Ad Hoc Operations</i> .....	91
<i>Set-Piece Operations</i> .....	91
<i>Air-to-Air and Air-to-Ground Operations</i> .....	91
<i>Information Flows</i> .....	92
<i>Officer Rotations</i> .....	92
<i>Morale</i> .....	93
<i>Personal Courage and Self-Sacrifice</i> .....	93
<i>Unit Cohesion</i> .....	94
<i>Intelligence Collection and Analysis</i> .....	95
<i>Combined Arms</i> .....	95
<i>Inter- and Intr-Service Coordination</i> .....	95
<i>Command and Control Arrangements</i> .....	95
Additional Predictions of the Theory .....	96
<i>Congruence Across the Arab World</i> .....	96
<i>Congruence with Non-Arab Commissarist Militaries</i> .....	96
<i>Only Negative Predictions</i> .....	97
<i>Greatest Impact at Higher levels of Command</i> .....	97
Praetorianism .....	101
Praetorianism in the Middle East .....	101
The Effects of Praetorianism on Military Effectiveness .....	104
<i>Poor and Infrequent Training</i> .....	105
<i>Combined Arms</i> .....	105
<i>Morale</i> .....	105
<i>Unit Cohesion</i> .....	106
<i>Information Flows</i> .....	106
<i>Inter- and Intra-Service Coordination</i> .....	106
Additional Predictions of the Praetorian Theory: The Big Picture .....	107

The Palace Guard Theory .....	108
Palace Guardism in the Middle East .....	108
The Impact of Palace Guardism on Military Effectiveness .....	111
<i>Training Geared Toward Internal Security Duties</i> .....	111
<i>Poor and Infrequent Training</i> .....	112
<i>Problems Arising from the Lack of Training in</i> <i>Conventional Military Operations</i> .....	112
<i>Leadership</i> .....	113
<i>Morale</i> .....	113
Additional Predictions of the Palace Guard Theory: The Big Picture .....	114
Why Not More Predictions from this Theory .....	114
One Theory or Three? .....	115
<b>Chapter 4. A Theory of the Influence of Soviet Military Methods on Arab Military Effectiveness .....</b>	<b>119</b>
The Soviet Model as an Independent Variable .....	120
The Soviet Way of War .....	121
Predictions of the Theory .....	130
Unity of Command .....	130
Initiative .....	130
Creativity and Innovation .....	131
Ad Hoc and Set-Piece Operations .....	131
Planning .....	131
Offensive vs. Defensive Operations .....	132
Use of Maneuver .....	132
Operational Tempo .....	132
Combined Arms .....	132
Surprise: Operational Security and Reconnaissance .....	132
Employment of Armor .....	133
Employment of Artillery .....	133
Air-to-Air Combat .....	133
Air-to-Ground Operations .....	133
Logistics .....	134
Maintenance and Repair .....	134
Replacement and Reconstitution .....	134
Engineers .....	134
Technical Support to Military Operations .....	135
Additional Predictions of the Theory .....	135
Positive <i>and</i> Negative Predictions .....	135
Which Arab States Adpted the Soviet Model? .....	135
<b>Chapter 5. A Theory of the Influence of underdevelopment on Arab Military Effectiveness .....</b>	<b>139</b>
Derivation of the Theory .....	139
Culture and Underdevelopment .....	141
The Underdevelopment of the Arab World .....	142
Underdevelopment and Military Effectiveness .....	142
The Effects of Underdevelopment on Military Effectiveness .....	148
Employment of Weapons and Other Machinery .....	148

Absorption of New Equipment .....	149
Maintenance and Repair .....	149
Technical Support to Military Operations .....	149
Combat Engineers .....	150
Logistics .....	150
Information Flows .....	150
Planning .....	151
Intelligence Collection and Analysis .....	151
Combined Arms Operations .....	152
Operational Tempo .....	152
Training .....	152
Additional Predictions of the Theory .....	153
<b>Part II. Case Studies of Arab Military Effectiveness, 1945-1991 .....</b>	<b>155</b>
Which Cases? .....	155
Organization and Goals of the Chapters .....	156
Strategic vs. Tactical Performance .....	158
<b>Chapter 6. Egyptian Military Effectiveness, 1947-1991 .....</b>	<b>161</b>
The War of Israeli Independence .....	161
The Egyptian Invasion .....	162
Stalemate .....	165
The Israeli Counteroffensive .....	166
General Observations on Egyptian Military Effectiveness in the War of Israeli Independence .....	168
<i>Tactical Performance</i> .....	168
<i>Strategic Performance</i> .....	169
The Sinai-Suez War, 1956 .....	170
Politicization .....	170
Sovietization .....	172
The Armies on the Eve of War .....	173
The Israeli Offensive .....	174
The British and French Invasions .....	179
The War in the Air .....	180
General Observations on Egyptian Military Effectiveness in the Sinai-Suez War .....	181
<i>Tactical Performance</i> .....	181
<i>Strategic Performance</i> .....	184
The Yemeni Civil War, 1962-1967 .....	186
Egypt and the Egyptian Military, 1956-1962 .....	186
Civil War in North Yemen .....	187
Course of Operations .....	188
<i>Egypt Ascendent</i> .....	188
<i>The Tide Turns</i> .....	189
<i>The Egyptian Defeat</i> .....	192
General Observations on Egyptian Military Effectiveness in Yemen, 1962-1967 .....	193



The Six-Day War, 1967 .....	194
Egyptian Military Developments, 1962-1967 .....	195
The Armies on the Eve of War .....	197
The Israeli Airstrikes .....	201
The Israeli Invasion .....	203
<i>The Battles of Rafah and al-'Arish</i> .....	203
<i>The Battles of Umm Qatef and Abu Ageilah</i> .....	204
Egyptian Confusion and Reaction .....	207
The Egyptian Retreat .....	209
The War in the Air .....	211
General Observations on Egyptian Military Effectiveness in the Six-Day War .....	212
<i>Tactical Performance</i> .....	212
<i>Strategic Performance</i> .....	215
<i>The Causes of Egypt's Defeat</i> .....	218
The War of Attrition .....	220
Depoliticization, Part I .....	220
The Attrition Strategy .....	222
Course of Operations .....	223
General Observations on Egyptian Military Effectiveness in the War of Attrition .....	225
The October War, 1973 .....	228
The Change in Regimes .....	228
Depoliticization, Part II .....	229
Egyptian Planning .....	230
Rebuilding the Egyptian Military .....	234
The Soviet Role .....	235
The Balance of Forces .....	236
The Egyptian Assault, 6 October .....	237
The Fight for the Bridgeheads, 7-13 October .....	239
The Egyptian Offensive of 14 October .....	243
The Israeli Counteroffensive .....	245
The War in the Air .....	251
General Observations on Egyptian Military Effectiveness in the October War .....	253
<i>Strategic Competence</i> .....	253
<i>Tactical Incompetence</i> .....	254
<i>Bright Spots in Military Effectiveness</i> .....	255
<i>Overall Assessment</i> .....	256
The Gulf War, 1991 .....	257
Egyptian Military Developments, 1973-1990 .....	257
Egyptian Operations in Desert Storm .....	259
General Observations on Egyptian Military Effectiveness, 1973- 1990 .....	261
Summary: Egyptian Military Effectiveness, 1947-1991 .....	264
<b>Chapter 7. Iraqi Military Effectiveness, 1947-1991 .....</b>	<b>267</b>
The War of Israeli Independence .....	269
The Iraqi Armed Forces in 1948 .....	269

Iraqi Operations with the Arab Liberation Army .....	271
Iraqi Army Operations on the West Bank .....	271
<i>Operations in Samaria</i> .....	272
The Kurdish Revolt: Part I, 1961-1970 .....	273
Politicization .....	274
Sovietization .....	275
The Course of Operations .....	275
<i>Opposing Strategies</i> .....	276
<i>Iraq on the Offensive</i> .....	277
<i>The Fall of the Ba'th and the 1965 Iraqi Offensive</i> .....	278
<i>The Spring 1966 Offensive</i> .....	278
<i>A Domestic Political Interlude</i> .....	279
<i>Iraq's Final Offensive</i> .....	281
General Observations on Iraqi Military Performance Against the Kurds, 1961-1970 .....	281
The October War, 1973 .....	283
Iraq and the Iraqi Military, 1967-1973 .....	283
The Logistical Effort .....	284
Combat Operations .....	285
General Observations on Iraqi Military Performance During the October War .....	289
The Kurdish Revolt: Part II, 1974-1975 .....	291
Background to the Renewed Fighting .....	292
Course of Operations .....	294
General Observations on Iraqi Military Performance During the Kurdish Revolt, 1974-1975 .....	295
The Iran-Iraq War, 1980-1988 .....	296
Iraqi Military Developments, 1973-1980 .....	296
The Invasion of Iran, 1980 .....	298
<i>The Iraqi Preemptive Airstrike</i> .....	299
<i>The Iraqi Offensive</i> .....	300
The Iranian Counteroffensives, 1981-1982 .....	305
The Iranian Invasion of Iraq, 1982-1986 .....	308
<i>Depoliticization</i> .....	311
<i>Iraqi Military Reforms</i> .....	312
<i>Remaining Iraqi Tactical Problems</i> .....	313
<i>The War in the Air</i> .....	315
Reform and Victory .....	317
<i>The Battle of al-Faw</i> .....	317
<i>Building a New Model Army</i> .....	318
<i>The Second Battle of al-Basrah</i> .....	320
Iraq Goes on the Offensive, 1988 .....	322
Additional Observations on Iraqi Military Performance During the Iran-Iraq War .....	327
The Gulf War, 1990-1991 .....	330
The Invasion of Kuwait .....	330
Iraqi Strategy for the War Against the Coalition .....	332
The Air War, 17 January-24 February .....	334

The Battle of Khafji, 29-31 January .....	336
The Iraqi Army on the Eve of the Ground War .....	339
The Ground War, 24-28 February .....	341
General Observations on Iraqi Military Performance During the Gulf War, 1990-1991 .....	350
Summary: Iraqi Military Effectiveness, 1947-1991 .....	355
<b>Chapter 8. Jordanian Military Effectiveness, 1947-1991 .....</b>	<b>359</b>
The War for Israeli Independence, 1948 .....	360
Politicization .....	360
The British Influence .....	362
The Jordanian Armed Forces on the Eve of War .....	362
Jordanian Goals and Strategy .....	363
Course of Operations .....	364
<i>The Battle of Jerusalem</i> .....	366
<i>The First Battle of Latrun</i> .....	367
<i>The Israeli Ten Days Offensives and the Second Battle of             Latrun</i> .....	369
General Observations on Jordanian Military Effectiveness in the War .....	
of Israeli Independence .....	372
Jordanian-Israeli Clashes, 1949-1966 .....	374
Expansion and Modernization .....	374
The End of the British Presence .....	376
Politicization .....	376
Combat Operations .....	378
<i>The Battle of Qalqilyah</i> .....	378
<i>The Battle of as-Samu</i> .....	380
General Observations on Jordanian Military Effectiveness in the Battles of Qalqilyah and as-Samu .....	381
The Six-Day War, 1967 .....	382
Politicization .....	382
The Decline of British Influence .....	383
The Balance of Forces .....	383
Goals and Plans .....	385
Initial Moves .....	386
<i>Israel Decides on War</i> .....	388
Battles Around Jerusalem .....	388
<i>Operations Along the Jerusalem Corridor</i> .....	390
<i>Latrun</i> .....	392
The Battle for Jerusalem .....	393
Battles in Norther Samaria .....	395
<i>Janin</i> .....	395
<i>Qabatiyah Crossroads</i> .....	396
<i>The Janin-Tubas Road</i> .....	399
The Jordanians Retreat .....	400
General Observations on Jordanian Military Effectiveness During the Six-Day War .....	402
<i>Strategic Performance</i> .....	402

<i>Tactical Performance</i> .....	406
<i>Israeli Losses and Jordanian Prowess</i> .....	408
<i>The Role of Israeli Air Power</i> .....	409
<i>Why Jordan Lost the Six-Day War</i> .....	411
Jordanian-Israeli Clashes, 1968-1970 .....	412
The Lessons of 1967 .....	412
Depoliticization .....	413
The Battle of al-Karamah, March 1968 .....	413
General Observations on Jordanian Military Effectiveness at the Battle of al-Karamah .....	415
Black September and the Syrian Invasion of Jordan, 1970-1971 .....	416
Background to the Conflict .....	416
The Balance of Forces on the Eve of War .....	416
Initial Moves Against the PLO .....	417
The Syrian Invasion .....	418
Finishing off the Palestinians .....	421
General Observations on Jordanian Military Effectiveness During Black September and the Syrian Invasion of Jordan .....	422
<i>Strategic Performance</i> .....	422
<i>Tactical Performance</i> .....	423
The October War, 1973 .....	424
Course of Operations .....	425
General Observations on Jordanian Military Effectiveness During the October War .....	429
Jordanian Military Effectiveness Since 1973 .....	430
Lingering Strengths .....	431
Growing Problems .....	431
Summary: Jordanian Military Effectiveness, 1947-1991 .....	432
<i>Changing Patterns</i> .....	433
<i>Constant Patterns</i> .....	433
<b>Chapter 9. Syrian Military Effectiveness, 1947-1991</b> .....	<b>435</b>
The War of Israeli Independence .....	435
Syrian Operations with the Arab Liberation Army .....	436
Operations of the Syrian Army in Palestine .....	437
General Observations on Syrian Military Effectiveness During the War of Israeli Independence .....	442
The Six-Day War .....	443
Politicization .....	443
Sovietization .....	445
The Opposing Forces in 1967 .....	446
Course of Operations .....	448
<i>Israel Attacks</i> .....	448
<i>Denouement</i> .....	451
General Observations on Syrian Military Effectiveness in the Six- Day War .....	452
The Syrian Invasion of Jordan, 1970 .....	455
Syrian Military Developments, 1967-1970 .....	455
The Course of Operations .....	456

The October War, 1973.....	459
Asad Takes Over .....	459
Depoliticization .....	459
Sovietization.....	461
The Syrian Plan .....	462
The Opposing Armies on the Eve of War .....	463
The Syrian Offensive .....	465
<i>The Southern Assault Sector</i> .....	467
<i>The Northern Assault Sector</i> .....	469
<i>Mount Hermon</i> .....	470
<i>The Israelis Counterattack</i> .....	470
The Israeli Counteroffensive.....	472
The Air War .....	476
General Observations on Syrian Military Effectiveness During the October War .....	478
<i>Strategic Performance</i> .....	479
<i>Tactical Performance</i> .....	480
<i>Additional Influences on the Course of the Fighting</i> .....	484
<i>Summary Judgments from the October War</i> .....	486
The Syrian Invasion of Lebanon, 1976.....	487
Background to the Syrian Involvement .....	488
The First Syrian Offensive .....	488
The Second Syrian Offensive .....	491
<i>Preliminary Operations East of Beirut</i> .....	491
<i>The Drive on Sidon</i> .....	492
<i>The Drive on Beirut</i> .....	492
General Observations on Syrian Military Effectiveness During the Syrian Invasion of Lebanon .....	493
The Israeli Invasion of Lebanon, 1982 .....	495
Syrian Military Reforms and Reorganization .....	495
Background to the Israeli Offensive .....	496
The Opposing Forces .....	497
The Israeli Plan .....	497
The Course of Operations .....	499
<i>Operations in the Central Sector</i> .....	500
<i>The Israeli SAM Suppression Campaign</i> .....	503
<i>The Battle of the Bekaa Valley</i> .....	505
<i>The Israeli Offensive Along the Beirut-Damascus Highway</i> .....	508
General Observations on Syrian Military Effectiveness During the Israeli Invasion of Lebanon.....	509
<i>Strategic Performance</i> .....	509
<i>Tactical Performance</i> .....	510
<i>Sources of Defeat</i> .....	513
The Syrian Military Since 1982 .....	514
Summary: Syrian Military Effectiveness, 1947-1991 .....	515
<b>Chapter 10. Saudi Military Effectiveness, 1990-1991 .....</b>	<b>519</b>
Saudi Military Modernization .....	520
Politicization .....	522

Manpower Problems .....	523
The Gulf War, 1990-1991 .....	525
The Saudi Military in 1990 .....	525
The Course of Operations .....	526
<i>Saudi Performance During the Coalition Air Campaign</i> .....	526
<i>The Battle of R'as al-Khafji</i> .....	529
<i>The Coalition Ground Offensive</i> .....	531
General Observations on Saudi Military Effectiveness During the Gulf War .....	533
<i>Summary</i> .....	535
<b>Part III. The Tests</b> .....	<b>537</b>
Problems of Overdetermination .....	537
Overview of the Tests in Part III .....	538
<b>Chapter 11. Did the Arab Militaries Perform as the Four Theories Predicted?</b> .....	<b>541</b>
Patterns of Arab Military Effectiveness, 1945-1991 .....	542
Creativity .....	543
Information Flows .....	544
Initiative .....	545
Centralization of Authority .....	547
Command and Control Arrangements .....	548
Use of Maneuver .....	548
Employment of Armor .....	550
Employment of Artillery .....	551
Air-to-Air Combat Skills .....	551
Air-to-Ground Operations .....	552
Ad-Hoc Operations .....	553
Set-Piece Operations .....	555
Combined Arms .....	556
Unit Cohesion .....	557
Personal Bravery .....	558
Maintenance and Repair .....	560
Assimilation and Employment of Military Equipment .....	561
Logistics .....	561
Combat Engineers .....	562
Technical Support .....	563
Intelligence .....	564
Operational Security .....	566
Strategic Leadership .....	566
Tactical Leadership .....	568
Ability to Plan and Execute Complex Operations .....	569
Officer Rotations .....	570
Morale .....	571
Training .....	571
Ability of Soldiers to Benefit from Military Training .....	573
Preferred Operational Tempo .....	573

Attention to Offensive and Defensive Operations .....	573
Attention to Air Superiority .....	575
Unit and Service Coordination .....	575
Willingness to Take Casualties .....	577
Initial Conclusions .....	577
The Major Causes of Arab Defeat, 1945-1991 .....	580
Strategic vs. Tactical Performance .....	580
Limited Technical Skills .....	582
Other Factors Unrelated to Arab Military Effectiveness .....	584
Dogs that did not Bark .....	584
Subsequent Conclusions .....	585
<b>Chapter 12. Testing the Transmission Mechanism.....</b>	<b>587</b>
Education Within the Family .....	588
Education in Arab Schools .....	593
Passive Learning .....	593
The Persistence of the Traditional Educational Method .....	597
Technical Education .....	602
Resistance to Change .....	606
Military Training .....	607
A Rigid Training Method .....	607
Evidence from Iraqi Military Manuals .....	612
<i>British-Based vs Indigenously-Developed Iraqi Manuals</i> .....	615
Conclusions .....	618
<b>Chapter 13. Does Arab Military Effectiveness Improve When the Influence of Arab Culture is Mitigated .....</b>	<b>619</b>
Avoiding Areas of Weakness .....	620
How the Egyptians and Iraqis Mitigated the Effects of Arab Culture .....	620
Egypt, 1967-1973 .....	621
Iraq, 1986-1990 .....	622
Conclusions from the Egyptian and Iraqi Cases .....	623
Distinctive Military Cultures .....	624
How a Distinctive Military Culture Mitigates the Influence of Arab Culture .....	624
The Jordanian Armed Forces .....	625
<i>The Bedouin Role</i> .....	625
<i>The British Influence</i> .....	625
<i>The Importance of Size and Manning Practices</i> .....	626
<i>Jordanian Military Effectiveness</i> .....	627
Conclusions from the Jordanian Case .....	629
Explaining Other Instances of Exceptionally Good Arab Military Effectiveness .....	630
Exceptional Cases Resulting from a Distinctive Military Culture .....	630
<i>The Syrian Military, 1948</i> .....	631
<i>Saudi F-15 Pilots, 1990-1991</i> .....	633
Exceptional Cases Resulting from a Reliance on Elite Forces .....	633
<i>Syrian Commandos</i> .....	634
<i>The Iraqi Republican Guard, 1986-1991</i> .....	634

<i>The Royal Jordanian Air Force, 1966-1970</i> .....	635
<i>Iraqi Mirage F-1 Pilots, 1983-1988</i> .....	636
<i>Why "Eliteness" May have Mitigated the Influence of Arab Culture</i> .....	636
<i>Conclusions on Arab Elite Forces</i> .....	638
Conclusions Regarding the Other Cases of Exceptional Arab Military Effectiveness .....	638
General Conclusions .....	640
Additional Thoughts Regarding the Mitigation of the Influence of Arab Culture .....	641
<b>Chapter 14. Testing the Soviet-Model Theory Against the Arab Culture</b>	
<b>Theory</b> .....	<b>643</b>
The Soviet Theory and Arab Military History: A Recapitulation .....	644
Egypt, 1973-1991 .....	644
Cuban Military Effectiveness, 1975-1988 .....	645
Cuban Military Operations, An Overview .....	645
<i>Angola, 1975-1976</i> .....	647
<i>Ethiopia, 1977-1978</i> .....	649
<i>Angola, 1987-1988</i> .....	651
Patterns of Cuban Military Effectiveness .....	652
The Caliber of Cuban Opponents .....	657
The Composition of Cuban Forces .....	658
Decisive Factors in the Cuban Military Campaigns in Angola and Ethiopia .....	659
<i>Decisive Elements in Cuban-South African Battles, 1987-1988</i> .....	659
Summary of Cuban Military Performance, 1975-1988 .....	662
Conclusions .....	664
<b>Chapter 15. Testing the Politicization Theory Against the Arab Culture</b>	
<b>Theory</b> .....	<b>667</b>
The Politicization Theory and Arab Military History: A Recapitulation .....	667
The Iraqi Military, 1969-1991 .....	668
The Rise and Decline of Praetorianism and Palace-Guardism .....	668
The Rise and Decline of Iraqi Commissarism .....	669
The Argentine Military, 1982 .....	670
Argentine Military Operations in the Falklands: An Overview .....	671
<i>Initial Skirmishes</i> .....	672
<i>The British Come Ashore</i> .....	673
<i>Goose Green</i> .....	675
<i>The Battle for Port Stanley</i> .....	676
Patterns of Argentine Military Effectiveness .....	678
<i>Argentine Ground Force Effectiveness: Enlisted Personnel</i> .....	678
<i>Argentine Ground Force Effectiveness: Tactical Leadership</i> .....	679
<i>Argentine Ground Force Effectiveness: Strategic Leadership</i> .....	680
<i>Argentine Ground Force Effectiveness: Other Categories</i> .....	682
<i>Argentine Air Force Performance</i> .....	684



<i>Combat Support and Combat Service Support Functions</i> .....	688
Decisive Factors in the Falklands Islands War .....	690
Argentine Military Effectiveness and Arab Military Effectiveness.....	692
Conclusions .....	695
<b>Chapter 16. Testing the underdevelopment Theory Against the Arab- Culture Theory</b> .....	<b>697</b>
The Underdevelopment Theory and Arab Military History: A Recapitulation .....	698
Jordan, 1948-1991 .....	698
Related Evidence from the Egyptian, Iraqi, and Syrian Cases .....	701
Chadian Military Effectiveness, 1986-1987 .....	702
Chadian Military Operations Against Libya, An Overview .....	702
<i>The Events of 1986</i> .....	703
<i>The Chadian Offensive of 1987</i> .....	704
Patterns of Chadian Military Effectiveness .....	707
<i>Explaining the Rise and Fall of Libyan Military Dominance             in Chad</i> .....	709
<i>Chadian Strategic Leadership</i> .....	710
<i>Chadian Tactical Leadership</i> .....	711
<i>Chadian Technical Skills</i> .....	713
<i>Other Aspects of Chadian Military Effectiveness</i> .....	714
<i>Why Chad Won</i> .....	714
Chadian Military Effectiveness and Arab Military Effectiveness .....	717
Chinese Military Effectiveness, 1950-1979 .....	717
Chinese Military Operations, an Overview.....	719
<i>Korea, 1950-1953</i> .....	719
<i>India, 1962</i> .....	726
<i>Vietnam, 1979</i> .....	729
Patterns of Chinese Military Effectiveness .....	732
<i>Chinese Strategic Leadership Performance</i> .....	732
<i>Chinese Tactical Leadership Performance</i> .....	733
<i>Chinese Rank and File Performance</i> .....	735
<i>Chinese Combat Support and Combat Service Support             Performance</i> .....	736
<i>Chinese Air Force Performance</i> .....	738
Decisive Factors in Chinese Military Campaigns.....	739
Chinese Military Effectiveness vs. Arab Military Effectiveness .....	741
Arab vs. Non-Arab Third World Armies: A Comparison .....	742
Additional Evidence from Other Non-Arab Cases .....	746
<i>Iran, 1980-1988</i> .....	747
<i>The Angolan FAPLA, 1987-1988</i> .....	748
<i>North Korea, 1950-1953</i> .....	749
<i>Conclusions from the Non-Arab Cases</i> .....	750
Conclusions .....	751
Maneuver Warfare and Mechanized Warfare .....	752
Mechanized Warfare and Arab Warfare .....	755
Maneuver Warfare and Arab Warfare .....	756
The Interrelationship of Culture and Economics .....	757

<b>Chapter 17. Conclusions and Afterthoughts .....</b>	<b>759</b>
Culture and Arab Military Effectiveness: The Past .....	761
Culture and Arab Military Effectiveness: The Future .....	762
Culture and Arab Military Effectiveness: a Broader Perspective .....	763
<b>Bibliography .....</b>	<b>765</b>

## Chapter 1

### Questions, Methods, and Organization

In no nation is any professional group ever entirely responsible for its own actions. The solidarity of society as a whole is too strong to permit the existence of the sort of moral autonomy, existing in isolation, which any such total responsibility would seem to imply. The [military] staffs worked with tools which were put into their hands by the nation at large. The psychological conditions in which they lived were not altogether of their own making, and they themselves, through their members, were as their origins had molded them. They could be only what the totality of the social *fact*, as it existed in France, permitted them to be.

- Marc Bloch on France's  
defeat in 1940.<sup>1</sup>

This need for a total transformation of Arab society became evident to a number of Arab analysts who attempted to examine the failures of the Arabs in their resistance, military and otherwise, to Zionism and Israel. The deep-lying factors that have so far determined the course of this struggle and provided its unfortunate results have not been political, military, or economic, local or international, but basically cultural in the widest sense of the term. To overcome these factors no less than a cultural transformation is necessary.

- Constantine K. Zurayk on  
Arab defeat 1948-1973.<sup>2</sup>

Over the last fifty years, Western military analysts have often overlooked the individual when assessing military capability. The reams of analysis of armed forces produced during the Cold War focused primarily on the quality and quantity of weapons of likely belligerents, their strategy and tactics, and their ability to mobilize, deploy, and

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This thesis has been reviewed by the Central Intelligence Agency and the US Defense Intelligence Agency to ensure that it contains no classified information. This thesis does not necessarily reflect the views of the Central Intelligence Agency, the National Security Council, or the United States Government.

<sup>1</sup> Marc Bloch, *Strange Defeat*, (NY: Norton, 1968).

<sup>2</sup> Constantine Zurayk, "Cultural Change and Transformation of Arab Society," in Michael C. Hudson ed., *The Arab Future: Critical Issues*, (Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1979), p. 11.

support their forces. Barry Posen has remarked that because this analysis concentrated on the Soviet threat, and because the historical analogy to which Cold War analysts looked was combat in Europe during the Second World War, the men who would fight on both sides were generally assumed to bring similar strengths and weaknesses to combat.<sup>3</sup> This assumption of sameness became so central to Western military analysis that it frequently was projected on to non-Western societies as well.<sup>4</sup>

Although it may have been understandable to assume that the economic, political, and cultural similarities of Western states had similar influences on the military performance of their soldiers, it was inappropriate to make the same assumption for non-Western societies. It is self-evident that non-Western societies are organized differently from Western societies: they have different social and political structures, different behavioral patterns, different preferences and priorities, and different modes of thought, to name only the most obvious distinctions. All of these fundamental differences lead to differing abilities and methods of converting resources into military power.

The different ways that societies generate military power probably have been most readily apparent in the military history of the modern Middle East. Israel's consistently stunning successes over larger and better-armed Arab armies have been a clear sign that the military balance in the Middle East has primarily been driven by the military effectiveness of the opposing forces, rather than numbers or equipment. The course of the Iran-Iraq War indicated similar factors were at work as it took Iraq eight years to secure a marginal victory over Iran despite overwhelming advantages in firepower and modern technology. Based on these results, the authors of a RAND Corporation study on Arab militaries concluded, "Although differences in the human factors are inherently more difficult to measure and quantify than differences in equipment, competence has historically had a greater influence in deciding combat than equipment."<sup>5</sup>

In the aftermath of each Middle East war, Western military experts have offered numerous theories to explain Arab military ineffectiveness. Some have attributed the sources of Arab military weakness to economic factors, others have suggested the problem is politicization of Arab militaries, still others have blamed Soviet-style weapons and doctrine.<sup>6</sup> Meanwhile, casual observers and active participants in the various Middle

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<sup>3</sup> For a sample of the voluminous Cold War debate over the military capabilities of the Warsaw Pact and NATO militaries, see the essays in Steven E. Miller and Sean M. Lynn-Jones eds., *Conventional Forces and American Defense Policy*, (Princeton: Princeton University Press, 1989) and John J. Mearsheimer, *Conventional Deterrence*, (Ithaca: Cornell University Press, 1983).

<sup>4</sup> For example, see Mearsheimer, pp. 134-164.

<sup>5</sup> Anthony Pascal, Michael Kennedy, and Steven Rosen, *Men and Arms in the Middle East: The Human Factor in Military Modernization*, RAND R-2460-NA, (Santa Monica: RAND, 1979), p. 412.

<sup>6</sup> On arguments that Arab military problems are the result of low levels of economic development, see Anthony Cordesman, *Jordanian Arms and the Middle East Military Balance*, (Washington: Middle East Institute, 1983); Efraim Karsh, *The Iran-Iraq War: A Military Analysis*, Adelphi Paper 220, (London: IISS, 1987); and Roger Owen, "The Role of the Army in Middle Eastern Politics: A Critique of Existing Analyses," *Review of Middle East Studies*, No. 3, pp. 64-71. On excessive politicization of the military see Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970); Anthony Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, (Lanham, Md: University Free Press, 1987); the essay on Syria in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, Ct: Greenwood Press, 1983); Mark Heller, *State- and Regime-Maintenance and Military Incompetence in Iraq*, A Paper prepared for the conference "Iraq Under the Bath", University of Haifa, May 26-29, 1991; David C. Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," in Roman Kolkowicz and Andrej Korbonski eds., *Soldiers, Peasants and Bureaucrats: Civil-Military Relations in Communist and Modernizing Societies*, (London: George Allen and Unwin, 1982); also see the entries under Egypt and Syria in John Keegan, *World Armies*, (London: MacMillan, 1979). On the impact of Soviet-style military systems see S. A. El Edroos, *The Arab Hashemite Army, 1908-1979*, (Amman: The Publishing Committee, 1980); Jon D. Glassman, *Arms for the Arabs*, (Baltimore, MD: Johns Hopkins University Press, 1975);

East wars frequently have commented that Arab military operations are inhibited by patterns of behavior derived from Arab culture.<sup>7</sup> Conversely, many Arabs and some Western officers who have served with the Arabs argue that Arab culture also contributes in a positive way to the battlefield performance of Arab forces.

This study seeks to establish whether Arab culture has influenced the military effectiveness of modern Arab armies and air forces and, if so, in what ways and to what extent. It presents and tests a theory of the impact of Arab cultural traits on the battlefield performance of Arab militaries from 1945 to 1991. In particular, it compares Arab culture to competing explanations of poor Arab military performance to determine which best explains the persistent difficulties Arab militaries have experienced in combat since World War II.

By addressing this issue I hope to contribute to two critical questions of contemporary international security. First, to what extent is the Middle East military balance driven by cultural factors that have resulted in relatively ineffective military performances by Arab armies and air forces. Second, in what ways and to what extent does culture shape military effectiveness in general. With regard to this second objective, there has been relatively little scholarly work on questions of military effectiveness in general, and the issue of cultural influences on military performance has been almost completely neglected.<sup>8</sup> Nevertheless, to the extent that culture shapes both individual behavior and group interactions, it is reasonable to assume that it also influences how individuals and groups act in combat. Thus a full understanding of military effectiveness is impossible without an understanding of how--and how much--culture can influence the actions of soldiers and officers in battle.

### **Judging the Influence of Culture vs. Judging Culture**

In undertaking this study, I have no intention of "judging" Arab culture. Cultures develop in response to the circumstances and needs of their society. All cultures are different and some favor some behavioral traits while others may favor the exact opposite traits. Neither way is "right" just as neither is "wrong." However, it is undeniable that favoring some patterns of behavior over others is likely to have ramifications for a wide range of human activities. One of these activities is warfare. Thus I seek to establish not

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Aharon Levran and Zeev Eytan, *The Middle East Military Balance, 1987-1988*, The Jaffee Center for Strategic Studies, (Boulder: Westview, 1988); R. D. McLaurin, "Military Operations in the Gulf War: The Battle of Khorramshahr," (Aberdeen Proving Grounds, MD: US Army Human Engineering Laboratory, July 1982); Roger Owen, "The Role of the Army in Middle Eastern Politics: A Critique of Existing Analyses," *Review of Middle East Studies*, No. 3, pp. 64-71; and Abraham Wagner and Anthony Cordesman, *The Lessons of Modern War, Volume II: The Iran-Iraq War*, (NY: Westview, 1990).

<sup>7</sup> On Arab recognition of cultural problems hindering their combat operations see, Fouad Ajami, *The Arab Predicament*, (Cambridge: Cambridge University Press, 1981), pp. 25-30; Raymond W. Baker, *Sadat and After: Struggles for Egypt's Political Soul*, (Cambridge, Ma: Harvard University Press, 1990), p. 188; Anthony Cordesman, *Jordanian Arms and the Middle East Military Balance*, (Washington, DC: Middle East Institute, 1983), p. 128; Col. Trevor Dupuy, *Elusive Victory*, (NY: Harper and Row, 1978), pp. 346-348; Fuad I. Khuri, "The Study of Civil-Military Relations in Modernizing Societies in the Middle East: A Critical Assessment," in Kolkowicz and Korbonski eds., *Soldiers, Peasants and Bureaucrats*, Op. Cit., p. 13; Constantine Zurayk, "Cultural Change and Transformation of Arab Society," in Michael C. Hudson ed., *The Arab Future: Critical Issues*, (Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1979), p. 11. For Israeli comments to the same effect, see the comments by Generals Dayan and Adan quoted in G.P. Armstrong, "Egypt," in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, Ct: Greenwood Press, 1983).

<sup>8</sup> The two major works in the area of military effectiveness are Allen Millett and Williamson Murray eds., *Military Effectiveness*, 3 Vols., (Boston: Allen and Unwin, 1988); and Martin van Creveld, *Fighting Power: German and US Army Performance, 1939-1945*, (Westport, Ct: Greenwood Press, 1982). Other writers have addressed the topic, some at great length, however, their work generally has not been of great significance.

whether Arab culture is "bad" or "good" but how the values and behavior it favors influence the manner in which Arabs make war.

Since I am a Westerner and my principle audience also is a Western one, a simple comparison may serve to illustrate this point. Truth and loyalty are often incompatible. At times, a person is faced with the uncomfortable choice of either telling a lie or betraying a close friend or relative. Although both Western culture and Arab culture value both truth and loyalty, they do not necessarily value them equally. In the West, we are taught that truth is the greatest good in the world. We are taught that speaking the truth is always the best choice, because in the long run, speaking the truth will result in the best world for everyone--even if in the short run, speaking the truth means that a friend or relative may suffer. Of course, there is no objective reason to believe that this is true. We believe that the truth is the highest principle in all existence because we have been told that it is by our parents, our teachers, and our religious leaders. By contrast, in the Arab world, individuals are taught that loyalty to one's friends and relatives is the higher virtue. It is not that Arab culture does not value truth, only that loyalty comes first, and if preserving the obligations of loyalty to friends and family means distorting the truth, then so be it.

Neither of these approaches is right or wrong. I know of no scholarly research or empirical studies that prove conclusively that it is always better to tell the truth and betray a friend, or vice versa. Indeed, most Westerners and Arabs never even think to ask whether their cultural perspective is right or not. We assume that it is. Essentially, we take it as an article of faith that our cultural values are correct. Thus Western culture is not "better" than Arab culture, nor is Arab culture "better" than Western culture. They are simply different.

But these differences are important. They are important because the different values shape behavior and that behavior shapes every human activity, including warfare. Thus it is important to know that Western culture favors truth above loyalty and that Arab culture favors loyalty above truth. It is important because both of these values have tremendous ramifications for military operations. A culture wedded to truth above loyalty may well have better information management capabilities but worse unit cohesion. A culture wedded to loyalty above truth will likely have the opposite.

Thus while the culture of the Arabs is neither "better" nor "worse" than any other culture, its values unquestionably shape the actions of its soldiers and officers. My study seeks to discover how culture shapes these actions and how important is this influence to the consistent patterns of Arab military ineffectiveness between 1945 and 1991.

### **The Existing Literature**

Scholarly work on the impact of Arab culture on Arab military effectiveness is exceedingly thin. Numerous authors have made oblique references to the impact of Arab culture on the effectiveness of Arab militaries, but these asides are almost all derived from scraps of circumstantial evidence, and hardly qualify as scholarly explorations of the topic.<sup>9</sup> Moreover, much that has been said on the topic is badly warped by bias and racism. For these reasons, the field essentially consists of only three works worthy of mention.

Several months after the Six-Day War, Yehoshofat Harkabi--an Israeli officer--wrote the first piece specifically on this subject, arguing that the collapse of the Arab armies during the war derived from poor unit cohesion, which was itself a result of

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<sup>9</sup> See for example the various essays in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, Ct: Greenwood Press, 1983); and Thomas L. McNaugher, "Arms and Allies on the Arabian Peninsula," *Orbis*, Vol. 28, No. 3, Fall 1984.

societal influences that shaped Arab interpersonal relations.<sup>10</sup> Harkabi's data was primarily his own observations during the war and his theory appears to have been heavily influenced by the literature on unit cohesion that dominated Western military thought at the time.<sup>11</sup> Although Harkabi's work was important for putting in print the sentiment of many Israeli officers, it is less than rigorous, examines only a very narrow segment of the larger issue, and its conclusions do not withstand testing. Specifically, the strong cohesiveness of many Arab units in all of the Arab-Israeli wars, including the Six-Day War, suggests that Harkabi's hypothesis has little explanatory value.

Since this initial foray, few others have made an effort in this area. J. Bowyer Bell, in an article in *Parameters* after the October War of 1973, attempted to attribute Egyptian behavior during that war to traditional patterns of Arab warfare.<sup>12</sup> Although interesting, his work too suffers from fundamental flaws (for example, the traditional patterns of warfare he describes are characteristic of the Arabian peninsula, not the Nile delta) and provides little in the way of understanding the much broader patterns of Arab military performance.

The best study to date on the subject is a RAND report written in 1979 that attempted to explore the "human factor" in the Middle East military balance.<sup>13</sup> This study is noteworthy because it treated virtually the entire Middle East and identified a large number of patterns of poor military performance and a similar number of societal causes of those patterns. Nevertheless, this effort also left much to be desired. The RAND report still presented only partial lists of both the societal forces and patterns of military performance characteristic of Arab forces. The study failed to present a unifying theory of *how* societal factors shape battlefield performance, instead offering up circumstantial evidence as "proof" of a causal relationship. The study failed to test any of its implicit hypotheses and conclusions, many of which are dubious. Finally, the RAND report failed to establish the relative strength of the influence of societal factors on Arab military effectiveness, or to compare their importance to other possible causes. In short, its greatest contribution was to point out how fruitful this line of inquiry could be if pursued in a more comprehensive and rigorous fashion.

Moving beyond the narrow confines of the specific topic of Arab culture's influence on Arab military effectiveness, there is also a remarkable dearth of scholarly work on the general subject of the influence of culture on military effectiveness. The notion is present to some extent in Ken Booth's *Strategy and Ethnocentrism*, which is often considered the progenitor of recent work on militaries and culture.<sup>14</sup> Booth's study is a path-breaking work in which he points out a number of ways that culture shapes military considerations. However, because he is primarily concerned with demonstrating different ways in which national differences affect military operations--and the need for militaries to consciously address them--Booth does not delve deeply into many of the

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<sup>10</sup> Yehoshofat Harkabi, "Basic Factors in the Arab Collapse During the Six-Day War," *Orbis*, Fall 1967.

<sup>11</sup> The classic work on this subject (although written well after Harkabi's article) probably remains W.D. Henderson, *Cohesion: The Human Element in Combat, Leadership and Societal Influences in the Armies of the USSR, the US, North Vietnam, and Israel*, (Washington: NDU, 1979).

<sup>12</sup> J. Bowyer Bell "National Character and Military Strategy: The Egyptian Experience, October 1973," *Parameters*, Spring 1975.

<sup>13</sup> Anthony Pascal, Michael Kennedy, and Steven Rosen, *Men and Arms in the Middle East: The Human Factor in Military Modernization*, R-2460-NA, (Santa Monica: RAND, 1979).

<sup>14</sup> Ken Booth, *Strategy and Ethnocentrism*, (NY: Holmes and Meier, 1979). Booth's book was preceded by a number of other important works that laid the foundation both for his study and those whom he inspired. In the modern era, one can trace the notion of national "styles" in military operations at least as far back as Sir Basil Liddell Hart's *The British Way in War*, written after the First World War. Since then, Russell Weigley, *The American Way of War*, (Bloomington: Indiana University Press, 1973); and Jack Snyder, *Soviet Strategic Culture: Implications for Limited Nuclear Operations*, (Santa Monica: RAND, 1976); are considered among the seminal works written in this area prior to Booth's study.

relationships he brings to light.

*Strategy and Ethnocentrism* was followed by--and to some extent, was the impetus to--a growing body of literature treating the role of culture in military affairs. However, virtually none of this work has addressed the issue of culture and military effectiveness. Only Stephen Peter Rosen's recent work, *Societies and Military Power: The Indian Army in Comparative Perspective* deals with this particular subject.<sup>15</sup> In this book, Rosen analyzes the impact of Indian culture, and specifically the Indian caste system, on Indian military capabilities.

Instead, most of the recent work on the relationship of culture and military affairs has been on the concept of strategic culture.<sup>16</sup> As one of its theorists explains, strategic culture is, "The set of attitudes and beliefs held within a military establishment concerning the political objective of war and the most effective strategy and operational method of achieving it."<sup>17</sup> Essentially, strategic culture attempts to explain why political-military leaders adopted a particular set of strategic and operational approaches to a military situation. The strategic culture theorists aver that these choices will be determined to a great extent by the subjective biases of those leaders. The strategic culture literature treats culture--in the sense of the values of the society--as one element contributing to those subjective biases, that is, to the strategic culture.

Although my study is related to the topic of strategic culture, it is very different. Whereas the strategic culture theorists focus on culture as one element in a *subjective* perspective on military situations and attempt to discern the nature of that subjective perspective, my proposed study approaches culture as an *objective* factor that constrains or enhances the ability of military forces to execute the strategic and operational tasks appointed them. A good way to clarify this distinction is with an example suggested by Stephen Peter Rosen. If one were to take an American political-military leader--say Dwight Eisenhower--and place him in charge of Egypt's political-military policy in 1973, the strategic culture argument would predict that Ike would attempt to fight the October War as he fought World War II because his strategy against Germany reflected the subjective biases of the American military's strategic culture.<sup>18</sup> Conversely, the extreme form of the argument in my study would predict that Ike probably would have fought the October War in a manner very similar to the way the Egyptian high command actually did because Egyptian culture imposed certain constraints on Egyptian capabilities which--along with a host of other considerations--made Cairo's actual strategy one of the few feasible options available to Egypt.

## **Methodology**

I begin by exploring the military history of five of the Arab states--Egypt, Iraq, Jordan, Saudi Arabia, and Syria--between 1945 and 1991. (I eventually address Libya as a case as well.) These detailed studies allow me to observe variations both in the dependent variable (military effectiveness), the proposed independent variable (Arab culture), and in the competing independent variables (underdevelopment, politicization,

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<sup>15</sup> Stephen Peter Rosen, *Societies and Military Power: The Indian Army in Comparative Perspective*, (Ithaca, NY: Cornell University Press, 1996).

<sup>16</sup> Some notable works in this area include Colin Gray, "National Style in Strategy: The American Example," *International Security*, Fall 1981; Yitzhak Klein, "A Theory of Strategic Culture," *Comparative Strategy*, Vol. 10, 1991; Nathan Leites, *Soviet Style in War*, (NY: Crane, Russak, 1982); and Carnes Lord, "American Strategic Culture," *Comparative Strategy*, Vol. 5, No. 3., 1991. Klein's work in particular, provides a good overview of the concept and a review of some of the recent literature on the topic.

<sup>17</sup> Klein, p. 5.

<sup>18</sup> This argument is explicitly made in Weigley, *The American Way of War*, pp. 312-359.



reliance on a Soviet model) over time for five (later six) different cases. Moreover, it also allows me to develop a portrait of the patterns of Arab military effectiveness common to the entire Arab world. By observing the changes (or lack thereof) in Arab military effectiveness over time as the influence of Arab culture, underdevelopment, politicization, and reliance on a Soviet model vary--both within these cases and among them--I can determine to what extent changes in military effectiveness were the result of changes in the influence of the different independent variables.

Then, I compare the military effectiveness of the Arabs generally to that of a number of non-Arab militaries. I examine the military effectiveness of Argentina, Chad, China, and Cuba in considerable detail, and that of Angola, Ethiopia, India, Iran, North Korea, South Korea, and Somalia to a much lesser extent. Since none of these states are Arab, culture varies between them and the Arab states. However, all of these other states are underdeveloped and several suffer from problems of politicization and/or rely on a Soviet model of military operations. Thus by comparing Arab military effectiveness to that of these other states it is possible to better discern the extent to which Arab culture, as opposed to any of the competing variables, explains the history of Arab military weakness.

Because both culture and military effectiveness are nebulous concepts that defy precise, objective measurement, my strategy for exploring the question of the influence of Arab culture on Arab military effectiveness is fairly involved. I construct six different tests to establish the explanatory power of the Arab-culture theory.<sup>19</sup> In these tests I measure predictions of the various theories both broadly and narrowly. I measure them broadly in that all of the theories generally predict poor Arab military effectiveness. I note changes in the influence of the various competing variables and observe whether these variations correlate with similar broad changes in Arab military effectiveness. I measure them narrowly by inferring from each theory specific hypotheses regarding how Arab militaries will fail in combat. There are many different flavors of military ineffectiveness: some armies cannot conduct combined arms operations, others have poor unit cohesion, still others are paralyzed by logistical incompetence. Thus I examine Arab military history to discern which of the predictions of the different theories regarding specific patterns of military ineffectiveness are borne out by the actual performance of the Arab militaries in combat. Moreover, I pay particular attention to changes in these specific patterns of military ineffectiveness to see if they correspond to changes in the influence of the various competing variables.

The six tests I employ are a combination of tests against the null hypothesis and competitive tests--what Imre Lakatos referred to as "two-cornered fights" and "three-cornered fights." I employ four different competitive tests and two different tests against the null-hypothesis. A competitive test measures the comparative explanatory power of two different theories, both of which purport to explain the same phenomenon. In a competitive test, two or more theories are pitted against each other. By contrast, a test against the null hypothesis, or "two-cornered fight" assesses whether the theory in question is a possible explanation for a phenomenon by assessing whether changes in the dependent variable correlate with changes in the independent variable. The null

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<sup>19</sup> On theory testing see, Alexander George, "Case Studies and Theory Development: The Method of Structured, Focused Comparison," in Paul G. Lauren, ed., *Diplomacy: New Approaches in History, Theory, and Policy*, (NY: Free Press, 1979); Gary King, Robert Keohane, and Sidney Verba, *Designing Social Inquiry: Scientific Inference in Qualitative Research*, (Princeton, NJ: Princeton University Press, 1994); Arend Lijphart, "Comparative Politics and the Comparative Method," *American Political Science Review*, Vol. 65, 1971, pp. 682-693; Stephen Van Evera, "Hypotheses, Laws, and Theories: A User's Guide," Unpublished Department Memo, MIT Political Science Department, Version 2.8; Stephen Van Evera, "How Can Theories be Made?" Unpublished Department Memo, MIT Political Science Department, Version 1.0, February 1, 1991; Stephen Van Evera, "What are Case Studies? How Should They be Performed?" Unpublished Lecture Notes, MIT Department of Political Science, Version 1.0, April 9, 1993.

hypothesis posits that the theory does not explain the phenomenon under consideration because there is no covariance between the independent and dependent variables. That is to say, changes in the dependent variable are not correlated with changes in the independent variable. For any theory to be considered a valid explanation of the phenomenon under consideration, it must disprove the null hypothesis. Any theory that cannot disprove the null hypothesis cannot be considered to have any explanatory power. Thus, tests against the null hypothesis are "two-cornered" because they posit only two potential outcomes: the phenomenon is explained by the theory, or it is not. Competitive tests are "three-cornered" because they pit a theory both against the null-hypothesis *and* against one or more alternative explanations for the same phenomenon.

These six tests also employ a combination of process-tracing and congruence process methods. A congruence test compares the inputs of a case with its outputs to ascertain whether the outputs (the dependent variable) are consistent with the influence of the inputs (the independent variable). If the outputs of the dependent variable are consistent with the inputs of the independent variable as predicted by the theory, this supports the contention of the theory that the independent variable is causing the behavior of the dependent variable. In my study, the question is whether the various patterns of Arab military effectiveness are consistent with the influence of Arab culture, underdevelopment, politicization, and/or reliance on a Soviet model.

The term process-tracing essentially refers to looking inside the case to examine the actual causal chain by which an output was reached.<sup>20</sup> A congruence test asks simply whether the patterns of the dependent variable match those predicted by the theory. Process-tracing asks why it was that the dependent variable turned out as it did and whether the process by which the dependent variable was arrived at was consistent with the predictions of the theory. It is useful to perform both congruence and process-tracing tests to ensure the robustness of a study's conclusions. I employ four congruence tests and two process-tracing tests in this study.

### **Summary of Organization and Findings**

For convenience and manageability, I have divided this study into three parts. The first part, encompassing chapters 2-5, presents the various theories that purport to explain Arab military effectiveness. Chapter 2 describes the theory of the influence of Arab culture on Arab military effectiveness. Essentially, I draw on the extensive sociological and anthropological literature on the Middle East to establish certain aspects of the dominant Arab culture that should be expected to shape the behavior of Arab armies and air forces in combat. I then infer predictions regarding the expected patterns of military effectiveness these cultural traits should be expected to cause. Very broadly, the theory predicts that Arab armies and air forces should have problems with tactical leadership, technical skills, and information management contributing to difficulty in fluid combat situations, combined arms operations, maneuver warfare, and handling the machinery of war. On the other hand, the theory also predicts that Arab armed forces should be better at static defense operations and set-piece offensives, and should benefit from strong unit cohesion overall.

Chapters 3-5 do the same for each of the three competing independent variables: politicization, reliance on a Soviet model of military operations, and underdevelopment.

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<sup>20</sup> Alexander George uses the term "process-tracing" to refer specifically to examining how a decision was arrived at to see if the motivations behind the decision were consistent with the theory being evaluated. I use the same term more broadly to denote the general method of observing the series of steps by which a phenomenon (the dependent variable) comes about and ascertaining whether that series of steps is consistent with the predictions of the theory.

For each, I begin by laying out the elements of the theory, drawing wherever possible on analytic work by other experts on the effects of these phenomena for military effectiveness. I then infer predictions regarding Arab military effectiveness from each of these theories. Thus, the underdevelopment theory generally predicts that Arab militaries should experience problems with the various technical aspects of war because of the unfamiliarity of Arab soldiers and officers with the workings of sophisticated machinery. The Soviet-model theory predicts that Arab tactical forces should be inflexible and largely incompetent, but their senior officers should be fairly able. On the other hand, the Soviet-model theory also predicts that Arab militaries should do well in combined arms operations and large-scale maneuver warfare.

I break politicization down into three sub-theories: praetorianism, commissarism, and palace guardism. Praetorianism refers to the involvement of the military in domestic politics, including military dictatorships in which the officer corps runs the government. Praetorianism broadly predicts that Arab militaries should suffer from poor morale and endemic distrust as a result of squabbles over domestic issues and maneuvering for political power, while training should be neglected because senior commanders are distracted by politics. Commissarism refers to the efforts of a despotic regime to maintain control over its armed forces by promoting loyalty instead of competence, rotating commands quickly and abruptly, and creating organizational structures that prevent any action without explicit permission from the regime. In general, commissarism predicts that Arab generalship should be poor, Arab tactical leadership should also suffer to a lesser extent, command structures should be bizarre and overcentralized, and morale should be terrible. Finally, palace-guardism refers to the phenomenon of militaries whose first priority is the defense of the regime against internal foes and therefore are ill-prepared to fight foreign armies. Palace-guardism predicts that Arab militaries will suffer because they have not trained to conduct operations against another army and, in particular, will prove inept at more complicated military operations such as maneuver warfare, armor operations, air-to-air and air-to-ground operations, and combined arms operations.

Part II, consisting of chapters 6-10, is a detailed examination of the military effectiveness of five of the Arab states between 1945 and 1991--Egypt, Iraq, Jordan, Saudi Arabia, and Syria. The recent history of these five states encompasses much of the experience of Arab armies in combat since 1945. In addition, when outside observers draw generalizations regarding Arab military effectiveness it is to these five states that they normally refer. For each country, I examine the performance of its armies and air forces in every major conflict in which they participated.<sup>21</sup> This ranges from the million-man Iraqi army that fought in the eight-year long Iran-Iraq war, to the single Jordanian armored brigade that fought for ten days on the Golan Heights during the October War of 1973. I note those aspects of military operations they handled well and those they handled poorly, as well as analyzing the various factors that led to victory or defeat. Moreover, I also describe fluctuations in the influence of each of the independent variables. Thus I note increasing and decreasing politicization, improving and declining socio-economic levels, the adoption and abandonment of Soviet practices, and other changes potentially related to the impact of cultural factors on the Arab armies. Part II therefore presents a history of Arab military effectiveness and the influences upon it.

Part III, comprising chapters 11-16, takes this history and draws from it information that can be used to test the validity of the Arab-culture theory and its rival theories. In Chapter 11, I perform a competitive test relying on the congruence method. I cull the various patterns of military effectiveness demonstrated by the five Arab countries examined in Part II and ask to what extent were the predictions of the various theories

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<sup>21</sup> I have chosen to exclude Arab naval forces from this study because there is too little evidence from which to draw reasonable conclusions. Arab navies have only fought in two wars, and the information available on these battles is too limited to analyze their performance in detail.

regarding Arab military effectiveness fulfilled by the actual combat history of the Arab states. In addition, I assess which of these different patterns were most important to the outcomes of the different Middle East wars to establish which of the different independent variables were most influential in causing the history of Arab military failures.

In this test, the Arab-culture theory performs best of the four theories because Arab military effectiveness conformed most closely to its predictions, and because poor tactical leadership and poor technical skills, two of the key predictions of the theory, were the two most important causes of Arab military failures. The underdevelopment theory did next best because Arab military effectiveness conformed fairly closely to its various predictions, and because poor technical skills, the key prediction of this theory, were probably the second most important cause of Arab military failures. Commissariat politicization did not fare as well as the first two because poor Arab generalship and morale problems, the key predictions of this theory, were not constants of Arab military history. However, because poor Arab generalship was at times a serious problem and on those occasions commissariatism appeared to be the cause of that incompetence, commissariatism did demonstrate a fair degree of explanatory power. Both praetorianism and palace-guardism did poorly, because Arab military effectiveness remained virtually unchanged even after Arab militaries were ruthlessly disentangled from domestic politics (thus eliminating the praetorian influence) and forced to prepare full time for war with foreign powers (thus eliminating the palace-guardist influence) in the 1960s and '70s. Finally, the Soviet-model theory did worst of all because Arab military effectiveness showed little variance between those armies that relied on Soviet methods and those that did not. Indeed, the only predictions of the theory that appeared to hold true were those that indicated that the Soviets had had a *positive* influence on their Arab allies.

Chapter 12 tests whether a plausible mechanism can be discovered that causes the independent variable of my theory--Arab culture--to affect the dependent variable--military effectiveness. If culture affects military performance a transmission process by which culture is infused into military behavior should be apparent. Although if no transmission process can be readily identified this would *not* disprove the Arab-culture theory, being able to identify such a process that does conform to the theory would be a strong mark in its favor. My hypothesis is that this transmission mechanism lies in the Arab educational system and its impact on Arab military training methods. Relying on secondary accounts of Arab educational and military training, interviews with US military personnel who have trained with Arab militaries, and Iraqi training manuals recovered by US servicemen during the Gulf War, I conclude that there is very convincing evidence in support of this contention. Essentially, Arab children are taught by their parents the same values and ways of thinking that Arab students are taught by their teachers, and Arab soldiers and officers are taught by their drill instructors. Thus there is a constant, reinforcing inculcation of culturally-regular behavior via the educational method of Arab families, schools and military training programs that combine to produce culturally-regular soldiers and officers. Because this chapter is a "two-cornered fight" assessing only the validity of the Arab-culture theory, it is a test against the null hypothesis. Moreover, because I am getting inside the causal chain by which Arab-culture influences military effectiveness, it employs the process-tracing method.

The test performed in Chapter 13 is also a test against the null hypothesis, but it employs a combination of process-tracing and congruence method. In this chapter, I ask whether instances in which the effects of Arab culture have been mitigated in one way or another resulted in increased military effectiveness. It is a congruence test because I ask whether the different outcomes (better military effectiveness) are consistent with different inputs (reduced influence of culture), but also employs process-tracing because I again examine the causal process to demonstrate that the normal chain by which culture shapes military effectiveness has somehow been disrupted or skirted.

In this chapter, I find that when the influence of Arab culture was diminished Arab militaries did enjoy a noticeable improvement in their effectiveness in battle, but the results are not definitive. In at least three cases where the influence of Arab culture clearly was somehow mitigated, the Arab armed forces in question clearly performed abnormally well. However, I also note that there are at least six other instances in which Arab militaries performed better than usual, but it is unclear whether culture was somehow mitigated in those cases. These unexplained exceptions are not fatal to the theory, however. First, plausible explanations consistent with the Arab-culture theory can be offered to argue that in these three cases as well the effects of culture were reduced, although I can offer only limited evidence to support these arguments. Second, it may well be that these six cases are simply exceptions and the anomalous performance may be the result of unique circumstances unrelated to anything else. Finally, perhaps the strongest support for the Arab-culture theory in these cases is that while the Arab-culture theory can at least offer a plausible hypothesis (albeit without definitive evidence) none of the other theories can account for this anomalous behavior at all.

In chapters 14-16, I construct competitive tests again using the congruence method to establish the relative explanatory power among the Arab-culture theory and the competing theories. For each of the competing explanations, I assess the variance in military effectiveness both when culture is held constant and the competing independent variable is varied, as well as when culture is varied and the other independent variable is held constant. Thus in Chapter 14, I test reliance on a Soviet model against Arab culture first by comparing the military effectiveness of Egypt in 1973 (when it relied heavily on Soviet practices) and 1991 (when it had jettisoned the Soviet-model) with the military effectiveness of Cuba. Cuba relied heavily on Soviet military methods beginning in the late 1960s, and therefore the Soviet-model theory would predict that if the Soviet practices were the source of Arab problems, Cuba should have fought just as poorly--and poorly in the same ways--as the Arabs. The test reveals that there was almost no change in Egyptian military performance from 1973 to 1991 despite its abandonment of Soviet practices, and the performance of Cuban military forces in Africa between 1975 and 1988 showed few of the same problems as the Arabs. These results strongly support the Arab-culture theory and further discredit the Soviet-system theory.

In Chapter 15, I test the politicization theory against the Arab-culture theory. I begin by examining Iraqi military effectiveness both before and after Saddam replaced praetorianism and palace-guardism with commissarism and military expansionism. I next examine Iraqi military performance both before and after Saddam's decision to remove the commissarist shackles on the Iraqi armed forces during the Iran-Iraq war. I then compare the Iraqi experience to that of Argentina in the Falklands War of 1982. At that time, and for decades beforehand, Argentina's military was among the most politicized in the world in terms of all three flavors: praetorianism, commissarism, and palace-guardism. This test reveals that there was almost no difference in Iraqi military effectiveness before and after the decline of palace-guardism and praetorianism, and the elimination of commissarism produced only an improvement in Iraqi generalship. In addition, the Argentine armed forces generally experienced few of the same problems as the Arabs--with two exceptions. First, the Argentines also suffered from poor generalship, and second, the Argentines also experienced some problems with limited technical skills and an inability to take full advantage of their arms, albeit not quite so badly as the Arabs. These results support the Arab-culture theory to a greater extent than any of the variants of politicization, although they do reinforce the earlier finding that commissarism has a significant influence on generalship and probably was the major cause of poor generalship in the Arab world between 1945 and 1991.

In Chapter 16, I test the underdevelopment theory against the Arab-culture theory. I begin by comparing Jordanian military effectiveness from 1948 to 1991. Jordan began that period as one of the most backward and underdeveloped societies in the entire Arab world and ended it as one of the most advanced. I then compare the general Arab

experience to the military effectiveness of the armies of other, non-Arab Third World nations. Because there are so many Third World states, I felt it necessary to use several non-Arab cases rather than just one as I did for the politicization and Soviet-model theories. Thus I introduce Chad and China as new cases, and also refer back to the Argentine and Cuban cases discussed in the previous two chapters. The detailed examinations of these various states demonstrate similarity with patterns of Arab military effectiveness in only a narrow range of categories all related in one way or another to technical skills and the ability of an army to employ and support complicated machinery. In addition, to expand the sample even further I provide briefer accounts of the military experiences of Angola, Iran, and North Korea, and also refer to evidence regarding, Ethiopia, India, North Vietnam, Somalia, and South Korea.

The Jordanian case shows very little improvement in military effectiveness. Overall, the Jordanians were probably less competent (although better armed) in 1991 than they were in 1948. The one exception to this rule was in their ability to handle sophisticated weaponry, which did increase over time, but not enough to offset the decline in Jordanian tactical leadership skills after the departure of their British officers. Likewise, with the important exception of the various problems derived from limited technical skills and familiarity with machinery, the non-Arab Third World cases do not demonstrate any consistent patterns of military effectiveness among them, or any strong similarities with the Arab states. In particular, only a few of these countries experienced anything like the debilitating problems with tactical leadership and information management that were so problematic for the Arabs. Indeed, a number of countries such as Chad, China, Cuba, Somalia, North Korea, and North Vietnam performed extremely well in these categories of military effectiveness.

The results of this test again support the Arab-culture theory over the underdevelopment theory, but not by quite as much as for the other theories. The problems the Arab states experienced with handling weaponry, maintaining their weapons in battle, integrating the various combat arms, and providing technical support to their military establishments played a very important role in the history of Arab defeats and Pyrrhic victories. However, they also suggest that the case for a "Third World Way of War" has been overstated and should be confined to those problems arising from the dearth of technical skills among underdeveloped societies.

As a way of understanding the different influences of Arab culture and underdevelopment on Arab military effectiveness, I draw a contrast between maneuver warfare and mechanized warfare. Briefly, maneuver warfare is the ability of one side to prevail in battle by outmaneuvering, deceiving, or otherwise placing a foe at a disadvantage relative to its own forces. On the other hand, mechanized warfare is the ability to make war by utilizing the products of the industrial revolution--machinery. Skill in maneuver warfare is highly dependent upon aggressive, innovative, independent tactical leadership as well as the rapid, accurate transmission of information. The patterns of behavior characteristic of the dominant Arab culture constantly hindered Arab armed forces from conducting effective maneuver warfare. An ability to conduct mechanized warfare is highly dependent upon a thorough familiarity with and understanding of machines as well as the ability of one's officers and soldiers to interact with machinery and employ machines to their full potential. The problems created by underdevelopment hinder all Third World militaries--not just the Arabs--from performing mechanized warfare as well as industrialized states can. However, influences from the dominant Arab culture also were an important secondary influence on Arab problems with mechanized warfare.

As a result, throughout the postwar period, Arab militaries were incapable of effective maneuver warfare or effective mechanized warfare. By and large, whenever the Arabs faced a foe capable of effective maneuver warfare or capable of effective mechanized warfare they did poorly, and whenever they faced a foe capable of *both* effective maneuver warfare and effective mechanized warfare, they lost catastrophically.

Nevertheless, Arab deficiencies in maneuver warfare were more important than their deficiencies in mechanized warfare because the scope of Arab defeats--or the narrowness of their victories--depended more on the ability of their opponents to wage maneuver warfare than mechanized warfare. Consequently, because Arab deficiencies in maneuver warfare were more damaging than their deficiencies in mechanized warfare, and because Arab cultural traits had a tremendous influence on Arab maneuver warfare capabilities and an important secondary influence on Arab mechanized warfare capabilities while underdevelopment only influenced Arab mechanized warfare capabilities, the Arab-culture theory explains a greater share of Arab military ineffectiveness 1945-1991 than the underdevelopment theory.

Finally, Chapter 17 provides a summary of the conclusions of the different tests as well as some thoughts on the meaning of these results for Arab military effectiveness in both the past and the future. The overall results strongly support the contention that Arab culture was an important factor shaping the combat performance of Arab armies and air forces. While Arab culture cannot be said to have been the sole factor determining Arab military effectiveness--or even that it accounts for the *majority* of the variance in Arab military effectiveness--Arab culture was clearly the most important of a range of factors that collectively shaped the performance of Arab militaries on the modern battlefield. In particular, many of the influences of Arab culture were detrimental to the conduct of mobile, fluid combat operations--a problem that often proved decisive in recent wars in the Middle East.

Beyond the impact of culture, this study demonstrates a very powerful secondary influence from the underdevelopment of Arab societies on their military capabilities. Specifically, socio-economic backwardness limited the ability of Arab armed forces to employ the full panoply of war machinery available to the advanced, industrial states. This limitation proved most detrimental whenever the Arabs fought an advanced society that was able to realize the full potential of modern, mechanized arms.

Last, commissariat politicization of Arab armed forces also had an important effect on Arab military fortunes. Its greatest influence was on Arab generalship. Although commissariat was not a constant in Arab military history, when it was present it frequently resulted in poor generals being placed in command of Arab armies and these poor generals were frequently an important element of Arab defeats. In addition, commissariat probably had a more modest, impact on Arab tactical leadership, contributing to many of the same problems fostered by the patterns of behavior characteristic of the dominant culture.

The results of this study show little reason to believe that the praetorian and palace-guard variants of politicization, or reliance on a Soviet model of operations played much of a role in Arab military ineffectiveness from 1945 to 1991. With regard to praetorianism and palace-guardism, they almost certainly exerted some influence on Arab military performance during the 1940s, '50s and '60s when they were at their peak. However, the fact that there was no discernible change in Arab military effectiveness after both of these phenomena faded in the 1970s and '80s demonstrates that whatever effect they had paled in comparison to the impact of culture, underdevelopment, and commissariat. Likewise, the general absence of any differences between those Arab militaries that did adopt Soviet practices and those that did not demonstrates that the Russians were not the problem. At most, the Soviet system appears to have simply reinforced factors already present in Arab culture. Because several of the Arab armies improved in certain aspects of military effectiveness after they adopted a Soviet system, there is reason to believe that the Russians were actually helpful to the Arab war effort.

I conclude with a discussion of the implications of my findings for understanding Arab military performance in the past and for predicting Arab military effectiveness in the future. In both cases, I note that my study can offer only limited insights because both Arab culture and warfare are constantly changing. The Islamic armies of the 7th-12th centuries were a mighty host that conquered nearly the entire Mediterranean littoral.

Their superiority over their contemporaries almost certainly derived from the fact that Arab culture was very different at that point in time and/or the fact that warfare was very different and therefore the skills and traits needed to prevail in battle were also very different. Likewise, when looking into the future it is dangerous to project out current trends too far: Arab culture is changing and may be very different fifty years from now. The nature of warfare also is changing, and the skills needed for success in battle today may be liabilities at some future point. Since it is very hard to foresee what Arab culture will look like far into the future and because it is also very hard to foresee what warfare will look like in the future, it is almost impossible to know what the influence of Arab culture on Arab military effectiveness will be in the future, except that it will certainly be determined by the interaction of these two forces.



## **Part I**

### **The Theories**

Imagine that a sick man is examined briefly by four different doctors. The doctors all diagnose a different ailment, pointing to various symptoms they have casually observed during their brief visit with the man. Since all four doctors are highly competent, the sick man cannot decide among the diagnoses by the reputation of the doctors alone. Moreover, none of the diagnoses are so absurd that they can be dismissed out of hand. Thus the doctors must do a more thorough examination of the patient to establish precisely which of the ailments suggested is actually the culprit. In particular, they must examine the man to determine exactly which symptoms he manifests and to which disease these symptoms correspond. Assuming the man has only one ailment, that he manifests all of the symptoms of that illness, and that there is not substantial overlap in the various symptoms of the various illnesses suggested, it should be easy to determine which doctor is right.

This example is analagous to our situation. We are aware that the patient is sick: Arab armed forces may not be "diseased" but they certainly haven't been well over the last fifty years. The question we seek to answer is, "what is it that ails Arab militaries?" The first step toward answering that question is to establish the different possibilities and the symptoms associated with each. In Part I, I lay out four different explanations for Arab military ineffectiveness--akin to the four different diagnoses of the doctors. All of these explanations seem, at first glance, to be plausible explanations for Arab military ineffectiveness since 1945. Thus, none of these "diagnoses" can be thrown out as being deductively illogical or blatantly empirically false. In addition, I detail the various patterns of military performance associated with each explanation, which is similar to describing the "symptoms" associated with each particular "malady."



## Chapter 2

### A Theory of the Influence of Arab Culture on Arab Military Effectiveness

In this chapter I develop a theory of how Arab culture has shaped Arab military effectiveness since the Second World War.<sup>1</sup> I begin by defining my independent and dependent variables, as well as establishing certain additional ground rules regarding my treatment of the Arab world. I then discuss the methodology I employed to develop my independent variable--Arab culture. In the rest of the chapter, I flesh out the independent variable by describing the salient characteristics of Arab culture that should be expected to influence Arab military effectiveness. Finally, I draw from these characteristics a number of hypotheses concerning specific patterns of military effectiveness that Arab armed forces should be expected to display to the extent that their behavior is influenced by these features of Arab culture.

#### Definitions

Like any good social scientist, I think it important to begin by defining the terms I use to denote my independent and dependent variables. Culture, my independent variable, and military effectiveness, my dependent variable, are not original terms. Culture in particular has been treated by countless authors before me, and in virtually every instance, each author has defined it somewhat differently from his or her predecessors. In addition, both culture and military effectiveness are intangible forces. You can't touch either, nor can you get your arms around them. For this reason as well, I think it important to try to spell out exactly what I am referring to when I use these terms.

#### **Culture**

I define culture as the set of learned, shared values, patterns of behavior, and cognitive processes, developed by a community over the course of its history.<sup>2</sup> Culture is

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<sup>1</sup> I have confined my study to conflicts occurring after the Second World War for two reasons. First, most of the Middle East was colonized by Europeans before World War II, and European imperialism would be a severe intervening, or even confounding, variable in the combat performance of Arab armies. Second, because culture does change over time and decolonization was a major event shaping contemporary Arab culture, to extend the study back to the Mandatory period would be "mixing" two somewhat different Arab cultures with possibly differing influences on combat.

<sup>2</sup> In formulating this definition, I have drawn on the discussions of culture in Raymond Cohen, *Culture and Conflict in Egyptian-Israeli Relations*, (Bloomington, IN: Indiana University Press, 1990); Clifford Geertz, *The Interpretation of Cultures*, (NY: Basic Books, 1973); Sania Hamady, *The Temperament and Character of the Arabs*, (NY: Twayne, 1960); Mansour Khalid, "The Sociocultural Determinants of Arab Diplomacy," in George N. Atiyeh, ed. *Arab and American Cultures*, (Washington, DC: American Enterprise Institute for Public Policy Research, 1977); Clyde Kluckhohn, "Culture and Behavior," in Gardner Lindzey ed., *Handbook of Social Psychology*, (Cambridge, MA: Addison Wesley, 1954); Robert A. LeVine, "Properties of Culture: An Ethnographic View," in Richard A. Schweder and Robert A. LeVine eds., *Culture Theory: Essays on Mind, Self, and Emotion*, (NY: Cambridge University Press, 1984); Maxime Rodinson, *The Arabs*, Translated by Arthur Goldhammer, (Chicago: University of Chicago Press, 1981); and Joseph

not congenital; it is not written in a person's DNA, rather it is acquired behavior, learned by members of the community over the course of their lives. Clyde Kluckhohn summed this up in writing that, "Culture is a way of thinking, feeling, believing. It is the group's knowledge stored up for future use."<sup>3</sup> Culture is transmitted in a community through the formal and informal education of its members, primarily during the process of maturation from child to adult. Among the most important and most discernible elements of a culture are its religion, language, family life, and tribal or other groupings. These elements are simultaneously sources of culture, products of the culture, and methods for the transmission of culture. Geography has a major influence in shaping culture, as the climate, resources, security, fertility, etc., of a given region will have a profound impact on the culture of people living there.

The history of a community is crucial in the development of its culture. Culture is an accumulated set of behaviors derived from the common experiences of the society over time. Of particular importance, *culture is not static*; it evolves over time as the community reacts to new experiences, but this evolution is slow and often imperceptible. Embedded in a people's culture is their history, and in a sense, the behavioral patterns embodied in a culture are simply the responses of the community to significant historical events and influences. In the words of Issa Boullata:

The culture of any human group is its collective experience in time. As the group moves in time from generation to generation, it continuously meets with new needs that challenge it. The response of the group shapes its experience of reality, which in turn, adds to its culture. The group learns to acquire new cultural elements and discard others, so that its culture continues to develop in the service of group survival and enhancement. Culture is thus continually changing and accommodating the group's institutions, beliefs, and values, to its ever-rising needs, both material and otherwise. Certain cultures may be more open to change than others. But there is no culture that does not change unless it is a dead culture--i.e., an archaeologically reconstructed culture of an extinct group.<sup>4</sup>

Moreover, it is the middle-term historical experiences of a community that are most important in shaping its culture at any particular time. Cultural traits developed in response to historical experiences of the distant past tend to be superseded by those defined by more recent events. Very recent experiences, on the other hand, are not immediately absorbed by the fabric of a society's culture, but take time to seep in.

Culture influences an individual's preferences and priorities. By defining what the individual is likely to consider important, culture shapes an individual's preferred outcome in a given situation. For example, although the common trait of self-preservation generally will prompt an individual to prefer outcomes that do not result in death, earlier Japanese cultures relegated this preference to a secondary status behind honor. Consequently, during the Second World War, large numbers of Japanese soldiers chose death rather than the dishonor of surrender. Similarly, culture will shape the courses of action and methods an individual is predisposed to employ to secure a goal. Culture has a tendency to suggest that certain ways of doing things are better than others, thus culture shapes both ends and means. Finally, culture may actually shape the way in

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Rothschild, "Culture and War," in Robert Harkavy and Stephanie Neuman eds., *The Lessons of Recent Wars in the Third World*, Vol. 2, (Lexington, Ma: Lexington Books, 1987).

<sup>3</sup> Quoted in Kenneth W. Terhune, "From National Character to National Behavior: A Reformulation," *Journal of Conflict Resolution*, Vol. XIV, No. 2, p. 222. Emphasis in original.

<sup>4</sup> Issa J. Boullata, "Challenges to Arab Cultural Authenticity," in Hisham Sharabi ed., *The Next Arab Decade: Alternative Futures*, (Boulder, CO: Westview, 1988), p. 148.

which an individual thinks and how he or she approaches different situations.

In addition to its impact on the individual, culture also influences the behavior of groups by shaping interpersonal behavior. It teaches members of a society how to treat other people and how the individual should behave when part of a group. It establishes what is permissible and what is desirable behavior in public or within smaller groups.

Culture *influences* the behavior of the individual, but does not autocratically *determine* individual behavior. Culture is only one of many influences on the individual. Consequently, discussions of the impact of culture on collective undertakings reflect tendencies rather than iron-clad laws. As the Lebanese sociologist Sania Hamady writes, "(Culture) stands for a common denominator of national characteristics, with individuals varying from it in different directions and degrees. This concept does not correspond to the total personality of an individual, but describes the pattern of the culturally regular character."<sup>5</sup> Thus culture should be understood to represent a mean around which individual behavior varies.<sup>6</sup>

For this reason, it is important to bear in mind that culture is least useful in understanding the behavior of an individual, and appears most readily in the behavior of large groups over time. The larger the number of people, the more likely that their collective actions will reflect culturally regular patterns of behavior. Conversely, the collective actions of smaller groups of people, or of individuals, are more likely to be shaped by idiosyncratic factors. This is because individual personalities can more easily shape group actions when the group is small. As groups get larger, their collective personality tends to increasingly reflect the culturally regular persona, rather than the quirks of individual members of the group. In addition, this caveat is important if for no other reason than the reader should not take away the impression that "all Arabs act the same." Yehoshofat Harkabi warns:

We must be cautious when generalizing about national character; the ground beneath our feet is often shaky and we run the risk of generalization based on prejudices. However, in discussing social groups, there is no escape from assigning a collective personality to the group under discussion...It should be borne in mind, (however), that not every individual in the group need possess these characteristics.<sup>7</sup>

Within a larger society, such as the Arab world, culture also will vary from community to community and from nation to nation. These differences are often subtle and sometimes imperceptible to an outsider, nevertheless, they exist and are important. Halim Barakat observes that, "...Arab society has its own dominant culture, constructed from what is most common and diffused among Arabs. In addition it has its sub-cultures, those peculiar to some communities, and its counter-cultures, those of alienated and radical groups."<sup>8</sup> While this study primarily treats what Barakat calls the "dominant" Arab culture, it is important to remember the existence of both the sub-cultures and countercultures to which he alludes. Thus, culturally-regular Arab behavior should be

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<sup>5</sup> Hamady, p. 23.

<sup>6</sup> Please note that simply by pursuing the topic of Arab culture I will be dealing with what are, inevitably, stereotypes; I view this as unavoidable. Without question, all Arabs, as individuals, act differently from one another, and the notion of culture is least useful in understanding the behavior of individuals. No scholarly work regarding culture can claim to accurately predict the behavior of individuals in specific circumstances. Nevertheless, I accept the notion that culturally regular behavior does exist and that it is an important influence on the behavior of both individuals and groups, and that as such, it is too important an element of human behavior to be ignored by scholars.

<sup>7</sup> Yehoshofat Harkabi, "Basic Factors in the Arab Collapse During the Six-Day War," *Orbis*, Fall 1967.

<sup>8</sup> Halim Barakat, *The Arab World: Society, Culture, and State*, (Berkeley: University of Ca Press, 1993), p. 42.

understood as a regional mean around which national cultural means will vary.

### **Military Effectiveness**

I consider the various terms military effectiveness, military performance, combat performance, and combat effectiveness to be synonymous.<sup>9</sup> I define them as the ability of an armed service to prosecute military operations and employ weaponry in military operations. Military effectiveness therefore is a measure of the quality of a military's personnel, not the quality of its weaponry or the quantity of its troops or weapons. Military effectiveness refers to the ability of soldiers and officers to perform on the battlefield, to accomplish military missions, and to execute the strategies devised by their political-military leaders. If strategy is the military means by which political ends are pursued, military effectiveness refers to the skill by which those ends are pursued by the officers and enlisted men of the armed forces.<sup>10</sup> Essentially, it addresses *how well* a military force fought under a given set of circumstances.<sup>11</sup>

Throughout this paper, military performance refers to *collective* military undertakings. I do not include under the rubric of military effectiveness the actions of a single soldier or a specific general. As with culture, in the case of individuals, behavior and abilities are far too idiosyncratic to be analytically useful. It is only in the aggregate that military effectiveness can be gauged.

Military effectiveness is not specifically concerned with winning or losing wars. Armed services may perform highly effectively in many aspects of military performance yet still lose wars. The German Army from 1914 to 1945 was extremely competent in many areas of military performance yet ultimately lost both world wars. Indeed, the German army is often cited as an example of extraordinary military effectiveness because it fought so well even when faced by more numerous and better armed foes.<sup>12</sup> Military performance is only one element in victory or defeat; it can prove decisive in war, but there is no assurance it will.

For purposes of this study I have focused on the combat performance of the ground and air forces of Egypt, Iraq, Jordan, Saudi Arabia, and Syria.<sup>13</sup> These have been the major Arab participants in most Middle Eastern wars, and therefore the greatest amount of information is available regarding their experiences in combat. In particular, large numbers of highly detailed accounts of their combat operations are available--precisely the information needed to accurately gauge military effectiveness.

### **Arab Culture and The Arab World**

A critical assumption I make is that among the five countries I examine there is a common, overarching "Arab" culture--what Barakat refers to as a dominant culture. While I recognize that each of these states possesses a sub-culture that is subtly different from the larger, dominant Arab culture, I believe that the similarities exceed the differences. This view, although not universally accepted, is strongly supported by most

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<sup>9</sup>The two major works in the area of military effectiveness are Allen Millett and Williamson Murray eds., *Military Effectiveness*, 3 Vols., (Boston: Allen and Unwin, 1988); and Martin Van Creveld, *Fighting Power: German and US Army Performance, 1939-1945*, (Westport, Ct: Greenwood Press, 1982).

<sup>10</sup> This definition of strategy is derived from Sir Basil Liddell Hart, *Strategy*, (NY: Praeger, 1967), p. 335.

<sup>11</sup> I use the term "military effectiveness" in almost the identical sense of the Soviet concept of *effektivnost*, which John Erickson defines as "efficiency, effectiveness and battlefield performance." John Erickson, "The Soviet Military System: Doctrine, Technology and 'Style,'" in John Erickson and E. J. Feuchtwanger eds., *Soviet Military Power and Performance*, (Hamden, CT: Archon Books, 1979), p. 20; also see Christopher Donnelly, "The Soviet Soldier: Behavior, Performance, Effectiveness," in the same volume, p. 101.

<sup>12</sup> For example, see Van Creveld, *Fighting Power: German and US Army Performance, 1939-1945*.

<sup>13</sup> In Chapter 16 I also bring in Libya's experience in its wars with Chad in the 1980s.

Western and Arab scholars.<sup>14</sup> For example, Hamady states that these societies, "Share a uniform civilization, a homogeneous culture, similar customs, common traditions, and a common spiritual heritage in religion and literature."<sup>15</sup> Abdallah Laroui has written that in the Arab world, "Everywhere culture and society contain the same elements; the proportion alone changes and gives a country a particular aspect."<sup>16</sup> Barakat likewise asserts that

The Arab world constitutes a single society rather than a disparate collection of sovereign states. The latter view is often advanced by Western mainstream scholars and the mass media, but it ignores the artificial nature of many of these recently created political entities. If one begins by looking at social organization rather than political structures, one discovers that social diversity and local or regional peculiarities do not preclude Arab commonalities, especially in those areas . . . such as family, social class structure, religious and political behavior, patterns of living, change, and the impact of economic development.<sup>17</sup>

As noted above, I accept the characterization of Arab writers such as Barakat and El Sayyid Yassin that Arab society possesses both a "dominant" or "primary" culture as well as local "secondary" or "subcultures" as well as countercultures. However, for my purposes, it is the dominant Arab culture that is of greatest importance.<sup>18</sup> Only the dominant culture has an influence across the entire Arab world--although local subcultures almost certainly have their own distinctive impact and may be responsible for variations in military effectiveness among Arab militaries. Moreover, as most Arab writers have observed, the countercultures are mostly confined to small groups of marginalized intellectuals and consequently have little impact on the behavior of large Arab military forces.<sup>19</sup> Thus while I recognize the cultural variations within the region, it

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<sup>14</sup> For a dissenting view by an Arabist writer see the comments by Edward Said, in Atiyeh, *Arab and American Cultures*, p. 176. It is worth noting that even Said, representing the extreme Arabist position, admits that all Arab states "have points in common." Thus the differences between even extreme Arabists and more mainstream authors are essentially over whether the divergences among the sub-cultures of the Arab world exceed the similarities or vice versa.

<sup>15</sup> Hamady, pp. 17-18.

<sup>16</sup> Abdallah Laroui, "Sands and Dreams," in Atiyeh ed., *Arab and American Cultures*, p. 8.

<sup>17</sup> Barakat, *The Arab World*, p. 21. For concurring views of the essential similarity of Arab culture across this region from authors at the opposite ends of the Orientalist/Arabist controversy, see Roy R. Anderson, Robert F. Seibert, and Jon G. Wagner, *Politics and Change in the Middle East*, (Englewood Cliffs, NJ: Prentice Hall, 1990), p. 18; Barakat, *The Arab World*, p. 12; Ernest Gellner, *Muslim Society*, (Cambridge: Cambridge University Press, 1981), p.80; Leila Shukry El-Hamamsy, "The Assertion of Egyptian Identity," in Saad Eddin Ibrahim and Nicholas S. Hopkins, *Arab Society in Transition: A Reader*, (Malta: Interpret [Malta] Ltd., 1977), pp. 72-73; Michael Hudson, "The Integration Puzzle in Arab Regional Politics," in Michael C. Hudson ed., *The Arab Future: Critical Issues*, (Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1979), p. 82; Fuad M. Moughrabi, "The Arab Basic Personality: A Critical Survey of the Literature," *International Journal of Middle East Studies*, 1978, p. 111; Rodinson, pp. 1-12, 130-131; the passages from El-Sayyid Yassin in Halim Barakat, "Beyond the Always and the Never: A Critique of Social Psychological Interpretations of Arab Society and Culture," in Hisham Sharabi ed., *Theory, Politics and the Arab World: Critical Responses*, (NY: Routledge, 1990), pp. 140-141; and Constantine Zurayk, according to Hani A Faris, "Constantine Zurayk: Advocate of Rationalism in Modern Arab Thought," in George N. Atiyeh and Ibrahim M. Oweiss, *Arab Civilization: Challenges and Responses*, (Albany, NY: SUNY Press, 1988), p. 10.

<sup>18</sup> Barakat, *The Arab World*, pp. XI-13, and 42; and Barakat, "Beyond the Always and the Never," pp. 140-141.

<sup>19</sup> For example, see Barakat, *The Arab World*, p. 42; and Halim Barakat, "Arab Society: Prospects for Political Transformation," in Hudson, *The Arab Future*, pp. 65-66;

is the set of broad cultural similarities that extend across it on which I have focused in this study.

### **Some Caveats Pertaining to my Treatment of the Dominant Arab Culture**

Because culture generally, and Arab culture in particular, are topics that others have treated in the past, I believe it important to try to specify precisely how I approached this subject. First of all, I consider the dominant culture of the Arab world to be that of its settled communities--the cities and towns--and the agricultural and artisan-based economies that characterize them. The most important distinction I draw here is that between the settled communities and the Bedouin of the Arab world. While most Westerners still tend to associate Arab society with a nomadic existence, the vast majority of Arabs live in towns and, increasingly, cities. The proportion of the population that can still be considered Bedouin is extremely small--by 1970 nomads comprised less than 1 percent of the population of the Middle East--and even before World War II Bedouin comprised less than 15 percent of the population.<sup>20</sup> Although the values and lifestyle of the Bedouin still exert a powerful sway over the imagination of many Arabs, the reality of the dominant culture has been moving gradually but steadily away from that of the Bedouin for at least the last eight centuries. Consequently, I do not consider Bedouin culture to be the dominant influence on the broader Arab culture. Instead, I characterize the Bedouin as an important sub-culture of the greater Arab society, one which shares both important similarities and important differences with the "dominant" culture of the settled populace who comprise the overwhelming majority of the Arab world. In addition, I recognize that elements of Bedouin tradition remain an important part of certain aspects of modern Arab cultural values.<sup>21</sup>

Just as I do not consider the dominant Arab culture to be the traditional Bedouin culture, I also do not consider Arab culture to be identical to the religion of Islam. Although the overwhelming number of Arabs are Muslims, a textual evaluation of the Islamic religion does not provide the key to patterns of culturally regular Arab behavior. Religions are essentially vessels of culture; they tend more to espouse the ideals and values of a community than to shape those values. As such, religions are created principally as *products* of the culture. While it is true that, once created, religions tend to exert an independent influence on the culture, they are not immune from additional molding by the culture. After the birth of a religion (or its importation into a society), there is an almost constant struggle between the theoretically static religion and the constantly-changing culture, and the culture wins far more than it loses. It is generally the case that a religion is constantly reinterpreted to meet the changing needs of its community--needs which are expressed in its culture. For instance, Clifford Geertz has argued persuasively that Islam as it is practiced in Morocco (the western end of the Islamic world) is a remarkably different religion from the Islam practiced in Indonesia (the eastern end of the Islamic world). In both societies, Islam has been interpreted so that it meshes with the underlying, dominant culture. Again, there is no question that Islam has had an impact on Indonesian and Moroccan cultures, however, the impact of the cultures on the religion has been much greater.<sup>22</sup>

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<sup>20</sup> Andersen, et. al., p. 12.

<sup>21</sup> On differences between the bedouin subculture and the dominant Arab culture see Barakat, *The Arab World*, pp. 52-53; Daniel Bates and Amal Rassam, *Peoples and Cultures of the Middle East*, (Englewood Cliffs, NJ: Prentice Hall, 1983), pp. 107-128; Morroe Berger, *The Arab World Today*, (NY: Anchor, 1962), pp. 46-66; Dale F. Eickelman, *The Middle East: An Anthropological Approach*, (Englewood Cliffs, NJ: Prentice Hall, 1981), pp. 63-83; Hamady, esp. pp. 97-106; and Henry Rosenfeld, "The Social Composition of the Military in the Process of State Formation in the Arabian Desert," *Journal of the Royal Anthropological Institute*, 95, 1965, pp. 75-86 and 174-194.

<sup>22</sup> Clifford Geertz, *Islam Observed*, (Chicago: University of Chicago Press, 1971). On this point, the reader should not be confused as to the impact of the Arab-Islamic conquest of Morocco, which was



Islam is a product of Arab culture.<sup>23</sup> However, its sacred texts can serve as only a vague and nebulous guide to current Arab culture because Islam was shaped largely by the cultures of seventh-century Arabia--where the *Quran* was written--and the seventh and eighth-century fertile crescent--where the *Hadiths* were compiled. In the thirteen intervening centuries, Arab culture itself has changed dramatically, and as a result, classical Islam and Arab culture are no longer coterminous. While many Middle East societies claim to live strictly according to the laws of Islam as set down in the *Quran* and the *Hadiths*, the divergences from these traditions are at least as frequent as those areas of obedience. Despite the best efforts of orthodox Jews, Catholics, and Muslims, it is ultimately impossible for a twentieth-century society to live exactly as demanded by medieval religious doctrine. Even in Saudi Arabia and Iran, perhaps the two most fundamentalist of current Middle East societies, it is difficult to make the case that Saudis and Iranians are living their lives exactly as prescribed by the *Quran*. The *Quran* is interpreted slightly differently in virtually every Arab state, and even wider gaps exist between Arab states and non-Arab Muslim states. In every case, these differences can be explained largely by the differences in the underlying cultures.<sup>24</sup> Consequently, attempting to describe Arab culture by a textual exegesis of classical Islamic religious documents would not present an accurate portrait of Arab society as it existed between 1945 and 1991.

This last remark brings up another issue regarding my treatment of Arab culture. I focused on the culture of the Arab world only as it existed between the end of the Second World War and the end of the Gulf War. As noted above, cultures are not static or timeless; in fact all cultures are constantly changing. Arab culture during the period under consideration was subtly different from Arab culture as it existed before World War II, which in turn was different from the Arab culture of the nineteenth century, and so on back into the depths of time. For any culture, there are strong carry-overs from one period to the next--particularly so in the case of Arab culture, which remained unusually constant between the thirteenth and nineteenth centuries. However, it would not be correct to assert that Arab culture after World War II was identical to Arab culture during the Middle Ages. Indeed, since the Second World War, the Arab world has undergone a series of rather profound changes brought about by decolonization and independence, efforts toward industrialization, and the greater contact with the West.

This is also an important point to keep in mind: just as it is true that Arab culture during the period on which I focus is not identical to the Arab culture of millennia ago, neither is it entirely uniform throughout the narrow 46-year stretch of time I consider. Arab culture at the start of this period was closer to the culture of medieval Arab society than at the end of this period. Consequently, some of the cultural traits I consider were

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unquestionably enormous. Moroccan culture changed dramatically as a result of this event, however, this change was wrought by a combination of the new religion--Islam--and the new culture--Arabism--that were simultaneously imposed on the existing society. The Arab conquerors forcibly reshaped the societies they conquered. While in many ways, this reshaping was done in the name of Islam, because Islam, especially at that point in time, was an almost perfect reflection of Arab culture, the actual changes were in accord with Arab culture. The proof of this is in the differences between Morocco and Indonesia identified by Geertz. Because Moroccan culture was closer to Arabian culture to begin with, and because the Arab dominance over Morocco was both more comprehensive and longer, Moroccan culture was reshaped. In Indonesia, because of the lesser impact of the Arab armies on Indonesian society, there was much less impact on Indonesian culture. The end result is that Islam in Morocco is closer to the Islam practiced in the fertile crescent (the Arab "heartland") than is the Islam in Indonesia, because Moroccan culture is closer to the culture of the fertile crescent than is Indonesian culture.

<sup>23</sup> For example, see Geertz, as well as C.A.O. Van Nieuwenhuijze, *Sociology of the Middle East*, (Leiden: E. J. Brill, 1971), pp. 25-27;

<sup>24</sup> For a good, if simplistic, overview of divergences between the actual practices of Saudi Arabia, Iran and other Middle Eastern states and the dictates of classical Islam, see chapter 2 "The Foundations of Islam" and Chapter 11 "The Islamic Revival and the Islamic Republic" in Andersen, et. al.

more applicable in the first half of this period than in the latter half. However, that said, it is still true that all of the traits I consider did have a powerful influence on Arab behavior throughout the period under consideration, and the distinction between the earlier and latter halves is quite relative. This is particularly the case because culture is transmitted to members of the community primarily during the process of maturation from child to adult. Thus even the Iraqi, Egyptian, and Saudi soldiers who fought in the Gulf War of 1990-1991 (the most recent war I consider), began the process of cultural inculcation in the late 1960s and early 1970s.

The theory of the influence of Arab culture on Arab military effectiveness does not assert that the various traits identified as elements of the dominant Arab culture are necessarily unique to the Arabs. It is entirely possible, indeed highly likely, that many traits considered culturally regular for the Arabs are also important elements of other cultures, or of sub-cultures within other societies. Cultures are the responses of communities to a wide variety of influences including geography, topography, demography, economics, and history, to name only a few. To the extent that other societies share similar geography with the Middle East, or perhaps suffered analogous historical events, it would seem entirely likely that they would share cultural patterns with the Arabs developed in response to these common experiences.

I assume only two things regarding the uniqueness of Arab cultural traits. First, the cultural patterns developed by another society will invariably be subtly different from those of the Arabs, no matter how close they may seem at first glance. Culture is a hopelessly complex entity, subject to an enormous range of influences, and it is virtually inconceivable that two different societies living in two different areas of the world and experiencing two different histories (no matter how similar) would produce cultural traits that are carbon copies. At most, they may have cultural traits that are crudely similar. Second, for the same reasons, no other society is likely to have the same set of culturally-regular behavioral traits. There may be overlap in the cultural traits of different societies--reflecting similar historical experiences, environments, economic systems, etc.--however, the entire sets will not be identical.

Finally, it is crucial to remember that culture is an extremely nebulous subject. Culture is often like a will-o'-the-wisp: always just out of reach, slipping from our grasp when we try to pin it down. Unfortunately, the necessities of social science, rudimentary as they are, require some degree of concreteness and specificity in any variable. Consequently, to be able to subject culture to the methods of social science, I was forced to treat it in a more precise and simplistic fashion than the concept realistically deserves. I packaged Arab cultural elements into stronger and more clearly defined groupings than a more nuanced (and more accurate) portrait of Arab society would depict. To some extent, this "reductionism" may have distorted my treatment of culture. I see this as an unfortunate necessity. To be able to draw testable hypotheses from the concept of culture required imposing some specificity and clarity on an otherwise vague and nebulous phenomenon. However, I tried not to do grievous damage to the concept despite having to overlook many of the subtleties, connections, and distinctions of Arab culture. To adjust for some of the distortions arising from the need to treat culture more concretely and simplistically than is the case in reality, I have tried to temper my conclusions to reflect this artificial process.

### **Methodology Used to Derive the Independent Variable**

Culture is difficult to measure and difficult to categorize. In addition, depictions of Arab culture have been extremely controversial over the last forty to fifty years. For these reasons, how I arrived at the specifics of my independent variable, Arab culture, is an important question. Because my expertise is in Middle Eastern military affairs rather than Arab culture *per se*, I chose to rely on what has been called the "Delphi" method, which is to say that I relied on the wisdom of acknowledged experts. Rather than attempting to delve into Arab sociology on my own, I instead went to the large numbers

of works written on the sociology of the Middle East and sifted through them for the accepted wisdom regarding culturally regular Arab behavior. I sorted through a wide variety of works on the Middle East written by anthropologists, sociologists, and behavioral psychologists, as well as regional experts and (nominally) disinterested foreign observers, looking for behavioral traits commonly accepted as elements of the culturally-regular Arab persona.

Rather than try to judge the validity of sociological, psychological, or anthropological theories that purport to explain the origins of Arab cultural traits, I have limited my analysis to the observed behavior itself, and not the theories of the causes of the behavior. My study seeks to explain the causal connections between the observed behavior of Arabs and persistent patterns of Arab military performance; the origins of these behavioral patterns in the environment of the Middle East or events in Arab history, while undoubtedly interesting, are not relevant to my efforts and therefore have not been included in this study.

In relying on this method there were a number of important criteria that guided my work. The first was to only include behavioral patterns cited by experts on the Middle East and to discard traits suggested only by amateurs or generalists. There are a huge number of travelogues, and journalistic explorations of the Arab world that purport to give insight into the "Arab mind" based on the experiences of the author in the Middle East. I tended to disregard the suppositions of such accounts except in those rare cases where the traits cited were also supported by true scholarly work by respected Middle East experts, and in those cases, it was the expert studies upon which I relied. This criteria led me to exclude from consideration many "folk theories" regarding Arab culture for which I could find no support in the scholarly literature on the Middle East. Thus for example, I have not included a "disregard for human life" as a common trait of the dominant Arab culture, despite frequent claims by journalists and some military analysts that this is a central feature of the "Islamic Way of Warfare." In the wake of the civil war in Lebanon and Iran's resort to massive human-wave attacks against Iraq, a number of Westerners with only a passing acquaintance with the Middle East have argued that Islamic societies are willing to suffer enormous casualties to achieve even minor military objectives because there is little regard for the sanctity of human life in Islamic culture.<sup>25</sup> I found very little in the scholarly literature on Arab culture to suggest that this most Islamic of societies places little value on human life, and that Arabs are more willing than others to sacrifice lives in pursuit of minor goals.

The second criteria I employed was to try, to the extent possible, to make sure that any cultural trait I used was agreed to by experts on both sides of the Arabist-Orientalist schism. Scholarly work on the Middle East is badly divided between the Orientalist and Arabist schools. Essentially, the Orientalist school is composed of traditional Western scholars of the Middle East (although it includes a large number of Arabs as well) who emphasize the timeless, unchanging quality of Arab society, its uniformity, its roots in Islam, and the importance of its contact with Western society. The Arabist school arose in recent decades in response to the Orientalist view. Most Arabists--although by no means all--are Arabs who stress the constant transformation of Arab society, the fact that Islam is as much a product of Arab culture as it is an influence upon it, the diversity of the Arab world, and its own internal sources of change and progress.<sup>26</sup>

Questions of Arab culture and "personality" are a key battlefield in the Arabist/Orientalist feud, but there is actually much room for agreement. The differences

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<sup>25</sup> See for example, Robert Harkavy, "The Lessons of Recent Wars: Toward Comparative Analysis," in Robert Harkavy and Stephanie Neuman eds., *The Lessons of Recent Wars in the Third World*, Vol. 2, (Lexington, MA: Lexington Books, 1987). p. 17.

<sup>26</sup> This summary presents only the broadest outlines of the Orientalist/Arabist dispute. For a lengthier description of the issues, the quintessential Arabist critique of Orientalism remains Edward Said, *Orientalism*, (NY: Vintage Books, 1979).

between the two camps on this issue lie primarily in differing interpretations of the origins of these traits, their mutability, and their benefit to Arab society. However, what is of greatest importance for my study is that both groups (generally) agree that there is an overarching, dominant Arab culture, and therefore a culturally-regular persona as well. Likewise, there is a remarkable degree of agreement on the specific behavioral traits that make up this persona. Consequently, it was not the case that I had to rely entirely on one school or the other to try to develop a "portrait" of Arab culture. Instead, I was able to cull behavioral patterns suggested as culturally-regular for Arab society by both Arabists and Orientalists alike.

In order to ensure that the behavioral traits I used had a solid base of support in both the Arabist and Orientalist camps, I only included in my definition of Arab culture those traits for which I found agreement from *both* Arabist and Orientalist writers. In those instances where only one side or the other claimed that a particular trait was characteristic of Arab culture, I did not include the trait in my list of culturally regular behavioral patterns. For example, a number of Orientalists contend that Arab society is characterized by a state of "anomie," and, according to Morroe Berger in particular, is characterized by "free-floating hostility."<sup>27</sup> These Orientalists contend that Arabs as individuals tend to feel tremendous animosity toward one another--even to other members of their nuclear families--and while these sentiments are rarely ever manifest publicly, subconsciously they are a constant influence on the actions of most Arabs. While this may in fact be the case, because I found very little corroboration in the Arabist literature I did not include this proposed trait in my description of Arab culture.<sup>28</sup>

Another consideration in putting together a list of traits considered culturally regular for Arab society was to include cultural traits on which there was a consensus among Middle Eastern experts as to the behavior derived from the trait. In a number of cases, I found a substantial amount of support that a particular trait was an important element of Arab culture, but disagreement as to exactly what kind of behavior the trait produced. For example, I found a large number of authors who commented on the pervasiveness of fatalism among Arabs. Both Arabists and Orientalists seemed to agree that most Arabs tend to feel that they have little or no control over their own destiny. However, I could find no agreement on how this caused Arabs to act. Some authors, from both camps, argued that this fatalism tended to make Arabs inattentive to long-term considerations, unwilling to make sacrifices in pursuit of a greater gain in the future, apathetic, and even lazy.<sup>29</sup> Other authors, also spanning the Arabist-Orientalist divide,

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<sup>27</sup> Cited in Yehoshofat Harkabi, "Basic Factors in the Arab Collapse During the Six-Day War," *Orbis*, Fall, 1967, p. 681. According to Harkabi, this "anomie" is the primary source of Arab military weakness. Harkabi contends that because of this generalized hostility, Arab military formations never bond into a team. This weakness manifests itself in the form of poor unit cohesion in combat when Arab units disintegrate under the slightest duress because no man is willing to sacrifice for the good of his comrades. I found only very modest evidence in the sociological literature on the Middle East to support Harkabi's contention that Arab society is characterized by this state of constant hostility. For this reason I did not consider Harkabi's notion of anomie as a feature of the dominant Arab culture. For additional Orientalist accounts on this point, see Berger, pp. 143-144; Hamady, pp. 38-40; and David Pryce-Jones, *The Closed Circle: An Interpretation of the Arabs*, (NY: Harper Perennial, 1989), p. 99.

<sup>28</sup> There are cultural traits acknowledged by Arabists that may either be disguised forms of "anomie" or else, may be elements which the Orientalists are mistaking for societal "anomie." For example, Barakat argues that Arab society is characterized by a high degree of alienation. Barakat, *The Arab World*, p. 14. Similarly, many Arabist authors find Arab culture to include strong aspects of suspicion, envy, and secrecy, all of which, when observed as daily behavior might have led the Orientalists to contend that Arab society is pervaded by hostility and animosity.

<sup>29</sup> On arguments that Arab fatalism is paralyzing, see Barakat, "Socioeconomic, Cultural and Personality Forces Determining Development in Arab Society," in Ibrahim and Hopkins, *Arab Society in Transition*, p. 679; Hamady, pp. 184-190; Pervez Hoodbhoy, *Islam and Science*, (London: Zed Books, 1991), pp. 50-51; and Pryce-Jones, pp. 34-35.

argued equally persuasively that although Arabs tended to be fatalistic, this had no impact whatsoever on their behavior because they worked hard, sacrificed for the future, and believed that their labors would eventually bear fruit--or at least, that not working hard would unquestionably doom them.<sup>30</sup> So while I am willing to accept that fatalism may be a component of the dominant Arab culture, because there was no clear consensus among the experts as to the behavior prompted by this belief, I chose not to include it in my treatment of Arab culture.

Finally, I also chose to exclude from consideration culturally regular patterns of behavior that appeared unlikely to have a pronounced impact on military operations. Ultimately, my purpose is not simply to develop an encyclopedic list of the elements of the dominant Arab culture but to explain the performance of Arab militaries in combat. I came across any number of behavioral patterns derived from Arab culture that seemed to have only the most distant potential connection to the behavior of Arab soldiers and officers in battle. Consequently, I chose to exclude from consideration such Arab traits as generosity, hospitality, a tendency to indulge in florid speech and writing, particular sexual codes, and the fairly rigid gender roles, for instance. In each of these cases, while I found a considerable amount of scholarly support for these traits, support that spanned the Arabist-Orientalist split, and which agreed on the behavior that typically accompanied these traits, I could find only the most tenuous link between them and behavior on the battlefield. For example, there is little or no reason to believe that how Arab couples are expected to deal with sexual matters will influence how Arab men act in battle. Therefore, although including a discussion of this trait might have made this study infinitely more interesting to the reader, because it had no clear bearing on Arab military effectiveness, I chose not to include it in my treatment of the dominant Arab culture.

Because of these various criteria for inclusion, the reader should beware that my treatment of Arab culture can only be considered a partial list and is far from a comprehensive "portrait" of even the dominant Arab culture, let alone the entirety of Arab society. The behavioral traits I have chosen to include in my characterization of the dominant Arab culture include only those for which I was able to find significant support in both the Arabist and Orientalist literatures, for which there was a clear consensus among the experts as to the behavior produced by the trait, and which deduction suggested should influence military effectiveness. In short, my list of Arab cultural traits is only a selected group, and should not be considered to reflect the totality of Arab culture. Setting aside the sub-cultures and counter-cultures, the dominant culture alone possesses dozens, if not hundreds or even thousands of behavioral traits. I have culled from that set a small sub-set which I feel comfortable including in a list of features of Arab culture that should produce persistent patterns of behavior among Arab soldiers and officers in combat. A quick perusal of the limited set of characteristics I have included should quickly demonstrate that this list is hardly a complete profile of even the dominant Arab culture.

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<sup>30</sup> On arguments that Arab fatalism has no impact on Arab work habits or other behavior see Evelyn A. Early, "Fertility and Fate: Medical Practices among *Baladi* Women of Cairo," in Donna Lee Bowen and Evelyn A. Early, *Everyday Life in the Muslim Middle East*, (Bloomington, IN: Indiana University, 1993), pp. 102-108; Manfred Halpern, *The Politics of Social Change in the Middle East and North Africa*, (Princeton, NJ: Princeton University Press, 1963, 4th Paperback ed.), pp. 90-91; Abdullah M. Lutfiyya, *Baytin: A Jordanian Village*, (The Hague: Mouton and Co., 1966), pp. 44-46; Levon H. Melikian, "The Modal Personality of Saudi College Students: A Study in National Character," in L. Carl Brown and Norman Itkowitz eds., *Psychological Dimensions of Near Eastern Studies*, (Princeton, NJ: The Darwin Press, 1977), p.172; and John Waterbury, "Islam and Hajj Ibrahim's World," in Bowen and Early, *Everyday Life in the Muslim Middle East*, pp. 178-180.

## **Characteristics of the Dominant Arab Culture**

This section describes in detail the independent variable of the theory: Arab culture. It specifies several critical features of the "dominant" or "primary" Arab culture that should be expected to produce fairly specific behavior among Arab military forces on the battlefield. These traits are highly "distilled" in the sense that they have been reduced to an essential state that is a distortion of reality. Consequently, the reader should be aware that they have been greatly simplified, and in reality are less concrete, more nuanced, and have far greater distinctions than this treatment allows. These traits are an emphasis on conformity, centralization of authority, deference to authority, group loyalty, manipulation of information, atomization of knowledge, personal courage, and an aversion to manual labor and technical work.

### **Conformity and Creativity**

The behavioral trait for which I found the widest amount of scholarly support and the strongest consensus regarding its powerful impact upon many individuals in the Arab world during the period under consideration was the emphasis on adhering to traditional patterns of behavior and the promotion of conformity to group norms as a guide for individual behavior. Within the dominant Arab culture, the group often takes precedence over the individual. Individual desires and interests are often underplayed in favor of the good of the group. Indeed, many Middle East experts write of the general "submergence of the individual within the group."<sup>31</sup> Afif Tannous asserts that, "The individual learns to identify himself with [his] family group from the moment of birth and his behavior is patterned accordingly."<sup>32</sup> According to Halim Barakat, "Arabs tend to interact as committed members of a group, rather than as independent individuals who constantly assert their apartness."<sup>33</sup> A 1976 study of Jewish and Arab high school students in Israel showed that the "Arab subjects displayed a significantly higher need for social approval than their Jewish counterparts," and were far more concerned with remaining committed members of the group by obtaining its collective approval.<sup>34</sup>

The principal act by which the individual achieves the support and approbation of the group is by conforming to the values of the group. Consequently conformity is an important value of the dominant Arab culture. Hamed Ammar stated in his study of Egyptian village life, that there is a "Compelling moral law that the individual, to be in line with the group, should express group-sympathy; if the group is angry, he should be angry, if it is insulted, he must feel insulted."<sup>35</sup> According to the French Arabist Maxime Rodinson, "Submission to order and custom were laid down as corollaries of obedience to God."<sup>36</sup> Levon Melikian has remarked that "Arabic movies in general center around a moral issue and the consequences of breaking the accepted codes and patterns of behavior. In general they stress conformity."<sup>37</sup> Likewise, the Iraqi sociologist Sana Al-

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<sup>31</sup> Quote is from Berger, p. 33. Also on this point, see Hamed Ammar, *Growing Up in An Egyptian Village: Silwa, Province of Aswan*, (NY: Octagon Books, 1973), p. 132; Barakat, "Between the Always and the Never," p. 146; Barakat, *The Arab World*, p. 201; Cohen, *Culture and Conflict in Egyptian-Israeli Relations*, p. 22; Hamady, p. 28; Ibrahim and Hopkins, pp. 83-84; Fatima Mernissi, *Islam and Democracy*, Translated by Mary Jo Lakeland, (Reading, MA: Addison Wesley, 1992), pp. 104-113; and Nieuwenhuijze, p. 381.

<sup>32</sup> Afif I. Tannous, "Group Behavior in the Village Community of Lebanon," in Abdulla M. Lutfiyya and Charles W. Churchill eds., *Readings in Arab Middle Eastern Studies and Cultures*, (The Hague: Mouton, 1970), p. 100.

<sup>33</sup> Barakat, *The Arab World*, p. 24.

<sup>34</sup> Cohen, p. 46.

<sup>35</sup> Ammar, p. 48.

<sup>36</sup> Rodinson, p. 166.

<sup>37</sup> Levon H. Melikian, 'Authoritarianism and its Correlates in the Egyptian Culture and in the United

Khayyat titled the first chapter of her book on the role of women in Iraqi society, "The Pressure to Conform."<sup>38</sup>

The importance of conformity is related to and reinforced by a reverence for tradition. In particular, an important element of the dominant culture is that deeds should be conducted in accordance with traditional ways of doing things. There is wide agreement among Middle East experts that elements of the dominant culture encourage the individual to live his or her life in conformity with the extensive body of traditions Arab society has for virtually all activity.<sup>39</sup> Even where an activity has no precedent, it must be conducted "in the spirit of tradition."<sup>40</sup> Sahair El-Calamawy points out that:

In Arab cultures, tradition represents the highest qualities of excellence. Traditional in Arab culture means genuine and excellent. The language of a traditional poem today is the same language used by the Arab poets sixteen centuries ago. We still use the same language more or less, with all that it implies as a way of thinking and a manner of living.<sup>41</sup>

In the words of the great French Arabist Jacques Berque, Arab society is "intentionally traditionalist."<sup>42</sup> Urban Egyptians characterized a respect for tradition as one of their salient cultural traits, according to Laila Shukry El-Hamamsy.<sup>43</sup> Abdullah Lutfiyya considers "A deep-seated respect for tradition and the past," as a central facet of Arab society.<sup>44</sup> Elsewhere, Lutfiyya has argued that, "'Good' and 'Bad' acts are so defined in the light of the traditional norm. Thus, if an act is in accord with custom, it is good; if not, it is bad. In the absence of a specific traditional norm, one's behavior is expected to be guided by the spirit of tradition in general."<sup>45</sup>

One result of this constant pressure to conform is a corresponding stifling of originality. If all behavior must conform to established, traditional patterns, then there is little room for innovation and creativity. Indeed, there is a consensus among Middle East scholars that although there are many individuals and even important countercultures of great creativity within the Arab world, the dominant culture works to suppress originality and innovation. The result is that most Arabs show little flare for--or interest in--creative or novel approaches to a situation. "Conventional values . . . emphasize conformity over creativity," in the words of Halim Barakat.<sup>46</sup> Likewise, El-Sayyed Yassin sees "the 'Egyptian mind' as characterized by conventional rather than creative thinking."<sup>47</sup> Hisham Sharabi decries that, "In putting conformity above originality and obedience before autonomy, [Arab society] crushes creative talent and encourages only those

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States," *Journal of Social Issues*, 1959, pp. 60-61.

<sup>38</sup> Sana Al-Khayyat, *Honor and Shame: Women in Modern Iraq*, (London: Saqi Books, 1990). For additional support for this trait, see Barakat, *The Arab World*, p. 202-205; Berger, p. 136; Hamady, p. 34; and Ibrahim and Hopkins, p. 84.

<sup>39</sup> Barakat, *The Arab World*, pp. 105-106; Hamady, pp. 38-92, and 152-153; Adeed Dawisha, "Saudi Arabia's Search for Security," in Charles Tripp ed., *Regional Security in the Middle East*, (London: IISS, 1984), p. 258; Pryce-Jones, pp. 35-44; and Rodinson, pp. 164-165.

<sup>40</sup> Hamady, pp. 152-153.

<sup>41</sup> Sahair El-Calamawy, "The Impact of Tradition on the Development of Modern Arabic Literature," in Atiyeh, *Arab and American Cultures*, p. 47.

<sup>42</sup> Jacques Berque, *The Arabs*, (NY: Praeger, 1965), p. 241.

<sup>43</sup> Laila Shukry El-Hamamsy, "The Assertion of Egyptian Identity," in Ibrahim and Hopkins, pp. 71-72.

<sup>44</sup> Abdulla H. Lutfiyya, "Islam and Village Culture," in Abdulla M. Lutfiyya and Charles W. Churchill eds., *Readings in Arab Middle Eastern Societies and Cultures*, (The Hague: Mouton, 1970), p. 53.

<sup>45</sup> Lutfiyya, *Baytin*, p. 49.

<sup>46</sup> Barakat, "Between the Always and the Never," pp. 152-153.

<sup>47</sup> In Cohen, p.22.

powers that help to maintain it."<sup>48</sup> Jacques Berque writes that "Arabic culture purposely resists innovation," and Ernest Gellner has noted the "proscription of innovation," in Arab society.<sup>49</sup> According to Berque and Gellner, Arab society sees itself as complete. It does not need anything that it does not already possess, and so considers virtually all change threatening.<sup>50</sup>

The dominant culture consistently suppresses creativity, innovation, imagination, and all similar divergences from established patterns of action and thought. "Innovators are always the objects of shame and ridicule. Invariably there is an outright rejection of anything new that appears to conflict with tradition," according to Abdulla Lutfiyya.<sup>51</sup> These claims are echoed by the Syrian Poet Adonis (Ahmed 'Ali Sa'id), "The group has always been more highly valued than the individual, and stability has been sought at the expense of risky change and creativity. Innovators have been silenced, while static values and attitudes have been preserved."<sup>52</sup> Similarly, Hamed Ammar recounts that, in Egyptian villages:

One should not think in terms of "if" or "as if," as according to the prophetic tradition, "'if' opens the path for the devil's advance." It is also interesting to mention that the classical Arabic word for imagination (*Khayal*) is used in the village to denote "shadow," and does not refer to a mental process, except of course, to some literate persons. This does not mean that some children are not imaginative, and they are recognized by other children who may sometimes sneer at them by asking them to relate some of their fantasies (literally "pinches"). Children would tell you that such flights of fancy run through certain families, adults, however, do not expect children to use, much less exercise or enrich, their imagination as this would hamper their social and economic maturity.<sup>53</sup>

The tendency of the dominant culture to discourage innovation and creativity is among the more striking features noted by many Western observers of the Middle East. For example, American educators who have taught Arab students both in the US and the Middle East generally have found that Arab students are "Shrewd, politically astute to the nuances of human behavior but non-creative and non-analytical in thought-processes."<sup>54</sup> Similarly, Levon Melikian's study of Saudi college students found that, despite various other differences between them, both Saudis who had not gone to college as well as Saudi college students ranked the statement "accept new ideas" as the last or second to last priority of Saudi culture out of a group of ten statements reflecting different potential cultural values.<sup>55</sup>

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<sup>48</sup> Hisham Sharabi, *Neopatriarchy: A Theory of Distorted Change in Arab Society*, (Oxford: Oxford University Press, 1988), p. 47.

<sup>49</sup> Berque, p. 32, and Gellner, p. 24.

<sup>50</sup> Berque, p. 32; and Gellner, pp. 1-2.

<sup>51</sup> Lutfiyya, *Baytin*, p. 49.

<sup>52</sup> In Mounah Khouri, "Criticism and the Heritage: Adonis as Advocate of a New Arab Culture," in Atiyeh and Oweiss, p. 188.

<sup>53</sup> Ammar, p. 205. Further evidence of formal and informal codes proscribing innovation can be found in Manfred Halpern, "Four Contrasting Repertoires of Human Relations in Islam," in Brown and Itkowitz, p. 60;

<sup>54</sup> Anthony Pascal, Michael Kennedy, Steven Rosen, *Men and Arms in the Middle East: The Human Factor in Military Modernization*, RAND R-2460-NA, Santa Monica, June 1979, p. 27.

<sup>55</sup> Levon H. Melikian, "The Modal Personality of Saudi College Students: A Study in National Character," in Brown and Itkowitz, p. 170.



The preference for conformity over creativity has been institutionalized in unwritten but well-known codes in Arab society and in formal prohibitions in the *Shari'a*. Fatima Mernissi notes that "The words that mean 'to create,' like *Khalaqa* and *Bid'a*, are dangerous and stamped with bans. All innovation is a contravention of the order of things." She further points out that the word for Satan (*Shaytan*) comes from *Shatana* which means, "Straying from usual human behavior and becoming conspicuous by stepping out of the ranks in some way or another."<sup>56</sup> Bassam Tibi goes even further in noting that "The [Arabic] term for innovation is *Bid'a*, which is tantamount to heresy."<sup>57</sup> According to Lutfiyya, "Islam sanctions traditional behavior and gives it precedence over innovations. This view finds a legal support in the *Sharia* doctrine that declares, '*al-qadim yabqa zala qidamih*,' i.e. anything of the past has precedence (over innovation)."<sup>58</sup>

In short, free thought is generally discouraged by the dominant culture. Hisham Sharabi "sees Arab children as discouraged by their upbringing from exercising independent judgment. They are taught to accept unquestioningly the view of others."<sup>59</sup> Barakat writes that Arab children, "Avoid taking risks and trying new ways of doing things, for independence of mind, critical dissent, and adventure beyond the recognized limits are constantly and systematically discouraged by parents and other members of the family."<sup>60</sup> Likewise Saad Eddin Ibrahim and Nicholas Hopkins comment that, "To behave properly meant to learn to suppress individual impulses. Since individuals had to take the clues of proper behavior from traditional authority and heritage, and since they were not to choose or judge outside that framework, independent thinking and analytical abilities remained undeveloped, if not deliberately stunted."<sup>61</sup>

### Centralization of Authority

For the most part, the dominant Arab culture favors the centralization of authority and information in hierarchically organized social groupings. Indeed, Arab subordinates are regularly characterized as submissive and obedient to their superiors. They operate within a hierarchic structure in virtually all activity and keep to their assigned place within the hierarchy. Moreover, they generally demonstrate constant obedience and respect for their superiors, often regardless of circumstances. Most Middle East scholars concur that this pattern is characteristic of Arab social groups from families to business enterprises to government bureaucracies.

Probably the strongest source of this tendency is the Arab family. Despite the many changes in the Arab world since the Second World War, the family remains very

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<sup>56</sup> Mernissi pp. 95 and 96.

<sup>57</sup> Bassam Tibi, *Islam and the Cultural Accommodation of Social Change*, Translated by Clare Krojzl, (Boulder: Westview, 1991), p. 55. Also see Fuad Ajami, *The Arab Predicament*, (Cambridge: Cambridge Press, 1985), p. 103.

<sup>58</sup> Lutfiyya, "Islam and Village Culture," p. 53.

<sup>59</sup> In Cohen, p. 22.

<sup>60</sup> Barakat, *The Arab World*, 106.

<sup>61</sup> Saad Eddin Ibrahim and Nicholas S. Hopkins, "Introduction to Part II: Family and Sex Roles in Transition," in Ibrahim and Hopkins, p.84. For additional support on the suppression of creativity and innovation, see Berger, pp. 120-121, 156-158; Halpern, *Politics of Social Change in the Middle East*, p. 33; Hamady, pp. 152-153; Laroui, "Sands and Dreams," p. 50; Mernissi, pp. 90-95; Gerald D. Miller, "Classroom 19: A Study in Behavior in a Classroom of a Moroccan Primary School," in Brown and Itkowitz, esp. p. 151; Moughrabi, p. 107; Pryce-Jones, pp. 40, 382-388; Peter W. Wilson and Douglas F. Graham, *Saudi Arabia: The Coming Storm*, (Armonk, NY: M.E. Sharpe, 1994), p. 16. Also see Monte Palmer, Abdelrahman Al-Hegelan, Mohammed Bushara Abdelrahman, Ali Leila, El Sayeed Yassin, "Bureaucratic Innovation and Economic Development in the Middle East: A Study of Egypt, Saudi Arabia, and the Sudan," *Journal of Asian and African Studies*, Vol. XIV, No. 1, 1989, pp. 14-24. One conclusion of the study conducted by Palmer et. al. was that 90 percent of the senior bureaucrats interviewed in all three countries believed that "their subordinates were simply unqualified to innovate." Palmer et. al., p. 24.

much the basic social unit of the Arab world. This holds true even for the increasing numbers of urban-dwelling Arabs. While life in the cities makes it difficult for all but nuclear families to live together, relatives still try to live close by and frequently remain the primary support network for individuals.<sup>62</sup> According to Daniel Bates and Amal Rassam, "When one hears of reference to the decline of the family in the Middle East, it is usually in reference to the break-up of large residential entities and not necessarily to the diminution of the viability of the kinship grouping itself."<sup>63</sup> Derek Hopwood likewise states that, "In the whole of the Middle East, the family is at the centre of society, despite differences between tribal and settled populations, between town and country."<sup>64</sup> Similarly, as late as 1992, Donna Bowen and Evelyn Early still concluded that:

The family into which one is born, the natal family, is the most important social group in one's life. It provides protection, food, shelter, income, reputation, and honor. The family is the reference for assistance as one grows up, finds a spouse, job, and home, raises one's own family, and adjusts to changing social circumstances. The family mediates between the individual and the outside world, and Middle Easterners naturally assume that relatives will be favored. One's family name is a ready-made identification which reveals to all both one's reputation and one's access to assistance.<sup>65</sup>

Moreover, the Arab family has retained its traditional features: it is an extended family, characterized by patrilineal descent, and a patriarchal system.<sup>66</sup> In Halim Barakat's words, "The family is the basic unit of social organization and production in traditional and contemporary Arab society, and it remains a relatively cohesive institution at the center of social and economic activities. It is patriarchal; pyramidally hierarchical, particularly with respect to sex and age; and extended."<sup>67</sup>

The father is the head of the family, and he expects "respect and unquestioning compliance with his instructions."<sup>68</sup> In her study of a middle-class Egyptian family, Ilse Lichtenstadter found that the father, "is treated with respect and deference, and even the grown-up and married sons submit to his authority."<sup>69</sup> Abdulla Lutfiyya agrees that "The

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<sup>62</sup> Bates and Rassam, pp. 197-198; and Ibrahim and Hopkins, p. 85.

<sup>63</sup> Bates and Rassam, p. 198.

<sup>64</sup> Derek Hopwood, *Egypt: Politics and Society, 1945-1990*, 3rd Edition, (London: Harper Collins Academic, 1991), p. 166.

<sup>65</sup> Donna Lee Bowen and Evelyn A. Early, "Generations and Life Passages: Introduction," in Bowen and Early eds., *Everyday Life in the Muslim Middle East*, p. 14.

<sup>66</sup> Barakat, *The Arab World*, p. 23; Hamady, pp. 28-34; and Rodinson, pp. 149-166.

<sup>67</sup> Barakat, *The Arab World*, p. 23. For additional evidence of the persistent strength of the extended, patriarchal family in Arab society, see Ammar, pp. 44-70; Leonard Binder, "Egypt: The Integrative Revolution," in Lucian W. Pye and Sidney Verba eds., *Political Culture and Political Development*, (Princeton, NJ: Princeton University Press, 1965), p. 409; Samih K. Farsoun and Lisa Hajjar, "The Contemporary Sociology of the Middle East: An Assessment," in Sharabi, *Theory, Politics, and the Arab World*, p. 176; George H. Gardner, "The Arab Middle East: Some Background Interpretations," *The Journal of Social Issues*, Vol. XX, No. 3, 1959, pp. 24-25; Rodinson, p. 149; Hisham Sharabi in collaboration with Mukhtar Ani, "Impact of Class and Culture on Social Behavior: The Feudal-Bourgeois Family in Arab Society," in Brown and Itkowitz, esp. pp. 242-248; Sharabi, *Neopatriarchy*, esp. pp. 29-31; Tannous, pp. 100-104.

<sup>68</sup> Barakat, *The Arab World*, p. 23. For concurring opinions, see for example, Binder, p. 409; Gardner, pp. 24-25; Sharabi, "Impact of Class and Culture on Social Behavior," p. 243; Sharabi, *Neopatriarchy*, esp. pp. 7-20; and Unni Wikan, *Life Among the Poor in Cairo*, Translated by Ann Henning, (London: Tavistock Publications, 1980) p. 65.

<sup>69</sup> Ilse Lichtenstadter, "An Arab-Egyptian Family," in Lutfiyya and Churchill eds., p. 607.

youngster learns early in life to obey the father's orders without questioning them, and looks at his father as the mighty giant who rules unchallenged in the family's world."<sup>70</sup> Indeed, the Arab family is frequently a rather severe hierarchy in that the father makes most decisions regarding the external activities of the family, and he expects his wife and children to obey without dissent. As the Dutch sociologist C. A. O. Van Nieuwenhuijze put it, "The family father is the centre of the family in all respects. . . . Operationally speaking, the family father is the fountain head of authority and decision-making. . . . He is the one who knows how to decide; in doing his bidding the family, as an extension of him, will survive."<sup>71</sup> Likewise, according to Hamed Ammar, the father is not only "expected to make all of the important decisions," but he, "usually plans the work of his sons," in village communities.<sup>72</sup> Pegrouhi Najarian has noted that this pattern of paternal dominance of decision-making for the family holds true in even many of the most liberal, Western-minded middle-class families of urban Arab society.<sup>73</sup> So heavy is the father's control over decision-making that sons are taught to be submissive to their father and generally are discouraged from taking any decisions of consequence without paternal approval.<sup>74</sup>

Because of the dominance of the family as the primary social structure in the Arab world, the patterns of intra-family behavior have been expanded to virtually every aspect of Arab society.<sup>75</sup> Sania Hamady sums this up by saying, "Arab society starts with the family and is patterned on it."<sup>76</sup> In a recent study of Jordanian bureaucracies, Jamil Jreisat noted that "heads of departments rule their units as chiefs of tribes; they hold all powers, real or symbolic. . . ."<sup>77</sup> Halim Barakat writes that:

The continued dominance of the family as the basic unit of social organization and production has contributed to the diffusion of patriarchal relations and to their application to similar situations within other social institutions. Specifically, the same patriarchal relations and values that prevail in the Arab family seem also to prevail at work, at school, and in religious, political, and social associations. In all of these, a father figure rules over others, monopolizing authority, expecting strict obedience, and showing little tolerance for dissent. Projecting a paternal image, those in positions of responsibility (as rulers, leaders, teachers, employers, and supervisors) securely occupy the top of the pyramid of authority.<sup>78</sup>

While such centralization can lead to greater efficiency in the distribution of resources and setting of priorities, it also enforces a fairly rigid centralization of power at

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<sup>70</sup> Abdulla Lutfiyya, "The Family," In Lufiyya and Churchill eds., pp. 518-519.

<sup>71</sup> Van Nieuwenhuijze, pp. 385-386. See also, Barakat, "Between the Always and the Never," p. 146; Hamady, p. 32; and Lichtenstadter, p. 607.

<sup>72</sup> Ammar, p. 50.

<sup>73</sup> Pegrouhi Najarian, "Adjustment in the Family and Patterns of Family Living," *Journal of Social Issues*, Vol. XV, No. 3, 1959, pp. 35-36.

<sup>74</sup> Ammar, pp. 52 and 127; Halim Barakat, "Socioeconomic, Cultural and Personality Forces Determining Development in Arab Society," in Ibrahim and Hopkins, p. 680; Binder, p. 409; Cohen, p. 27; Gardner, p. 39; and Wikan, p. 65.

<sup>75</sup> Perhaps the most powerful statement of the influence of Arab family patterns on all other organizations and institutions in the Arab world is Hisham Sharabi's *Neopatriarchy*, op. cit., see especially, pp. 7-47.

<sup>76</sup> Hamady, p. 88.

<sup>77</sup> Jamil E. Jreisat, "Bureaucracy and Development in Jordan," *Journal of Asian and African Studies*, Vol. XXIV, 1-2, 1989, p. 100.

<sup>78</sup> Barakat, *The Arab World*, p. 23. For additional support for this argument, see Cohen, p. 27; and Ibrahim and Hopkins, p. 83.

the top, often precluding the delegation of authority to lower levels. Because the typical Arab family concentrates most power and decision-making authority in the father, and the Arab family is the model for the rest of society, there is a pronounced tendency for other organizations and institutions in the Arab world to similarly centralize authority in the hands of the chief executive, who effectively assumes the role of the father. Because a father is expected to make most if not all important decisions in typical Arab families, and his wife and children are expected to execute these orders without question, delegation of authority is rare and often superficial. Instead, decisions are constantly referred back to the highest executive levels, just as they would be referred to the father in a family. In a 1988 study of the bureaucracies of Egypt, Saudi Arabia and Sudan a team of mostly Arab social scientists found that, "Supervisors in the Middle East tend to concentrate as much authority as possible in their own hands. Little authority is delegated. . . . Innovation and risk taking are not reinforced. Many supervisory personnel in the Middle East prefer subordinates who keep a low profile and who 'don't rock the boat.' Subservience often brings greater rewards than hard work."<sup>79</sup> In short, there is a constant tendency toward highly centralized hierarchies in which authority is concentrated at the top, and rarely, if ever, delegated.<sup>80</sup>

### **Deference to Authority**

A cultural trait closely related both to the promotion of conformity and the tendency toward hierarchic centralization in Arab society is the tendency among individuals occupying the lower rungs of hierarchies to defer decision-making to higher authority and to remain passive, taking the initiative only for trivial decisions. This is the flip-side to the centralization of authority and the unwillingness of leaders to delegate authority: virtually all authority is concentrated in the top of the hierarchy, and not even middle-level officials are expected to act independently, nor do they believe it incumbent upon them to do so. While this can ensure that Arab social groupings do not suffer from "schizophrenic" behavior--one part of the group acting in a manner opposite to that of the rest of the group, or opposite to that desired by the leadership--it also contributes to a general lack of initiative among subordinates.

Once again, a wide consensus of opinion exists among Middle East experts that initiative and decision-making in Arab groups is expected to come from the top of the hierarchy and therefore those at the bottom of a hierarchy should remain passive, acting only as specifically directed to do so. For instance, Jacques Berque refers to the culturally-regular Arab as "*homo non faber*" and points out that numerous casual observers of Arab society have noted that "Arabs lose all initiative at adolescence."<sup>81</sup> "Denied freedom of choice, children learn to do only what they are told. Self-reliance and personal initiative are not encouraged because they do not contribute to group needs," according to Raymond Cohen.<sup>82</sup> Cohen also notes that "Psychological tests have shown that Egyptians score significantly higher in tests of obedience and unquestioning respect for authority than do Americans," and that such scores were found to be "culturally normal in an Egyptian context."<sup>83</sup> Hisham Sharabi explains that typical Arab families continue to nurture a set of values that consider all rules and orders handed down from higher authorities to be "sacred, untouchable, and of transcendent origin." The individual is not considered to be the equal of the issuer of the orders (the authority figure) in any

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<sup>79</sup> Palmer, et. al. pp. 21-22.

<sup>80</sup> Berque, p. 30; Cohen, p. 27; Hamady, pp. 111-113; Samir Mutawi, *Jordan in the 1967 War*, (Cambridge: Cambridge University Press, 1987), p. 1; Pascal, et. al., p. 35; and Hisham Sharabi, *Government and Politics of the Middle East*, (Princeton, NJ: Van Nostrand, 1962), chapter 1.

<sup>81</sup> Berque, pp. 103.

<sup>82</sup> Cohen, p. 22.

<sup>83</sup> Cohen, p. 28.

way, and therefore, the subordinate cannot possibly alter or interpret the guidance of his or her superior.<sup>84</sup>

Another powerful cultural factor fostering deference to authority and passivity among subordinates in Arab hierarchies are the forces of honor and shame. Honor and shame, essentially two sides of a coin, are powerful influences on behavior in the Arab world. Honor is a driving motive in many (some would say all) aspects of Arab life, and a failure to act honorably is punished with shame, which is to be avoided at all costs. Maxime Rodinson states simply that "Loss of honor, shame, or debasement was a terrible punishment."<sup>85</sup> Despite his rather extreme Orientalism, many Middle East experts seem fully in agreement with David Pryce-Jones' remark that, for most Arabs, "Honor is what makes life worth living: shame is a living death, not to be endured."<sup>86</sup> Because shaming is the primary instrument by which Arab society enforces conformity, and because shame is considered an unbearable punishment "worry about external dignity is (the Arab's) continual concern."<sup>87</sup> Ammar remarks on the "almost morbid fear of shame" in Egyptian village life.<sup>88</sup> Pierre Bourdieu, in his treatment of Algerian society, similarly finds that "the sentiment of honor, like its reverse, the fear of shame and group censure, can affect . . . deeply the most trivial action of daily life and can dominate all relations with other people."<sup>89</sup>

Honor and shame have a strong impact on proclivities toward action and initiative. In Arab society, to do something wrong generally is much worse than to do nothing at all. Because the dominant Arab culture focuses identity on groups rather than individuals, responsibility is generally considered to fall on the group in its entirety, rather than on any particular individual. As a member of a group, some event may be the responsibility of the group, but it is not necessarily the responsibility of any particular member of the group. Because responsibility is collective, no individual necessarily has any more responsibility to take action to avert disaster than anyone else. Indeed, the major concern is to avoid being held responsible for a calamity, and taking action is essentially accepting responsibility. Hence, by acting an individual invites the risk of shame, but by doing nothing the individual runs no such risk.<sup>90</sup> On this point, Hisham Sharabi comments that children are taught to believe themselves weak--weak before the commands of their father and the judgment of the group. Having such limited capabilities, the child can only have very limited responsibilities and is encouraged to believe that virtually everything is always someone else's responsibility. Consequently, because the child is taught to believe that he or she is neither responsible for, nor capable of, doing most things, he or she finds little reason to act in most circumstances.<sup>91</sup>

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<sup>84</sup> Sharabi, *Neopatriarchy*, pp. 44-45. Similar arguments are made by Ammar, pp. 44-133; Berger, p. 113; Ibrahim and Hopkins, pp. 83-84; Pascal, et. al., p. 27; and Pryce-Jones, p. 321.

<sup>85</sup> Rodinson, p. 165.

<sup>86</sup> Pryce-Jones, p. 35.

<sup>87</sup> Hamady, p. 35.

<sup>88</sup> Ammar, p. 230.

<sup>89</sup> Quoted in Miller, p. 151. For additional support for the importance of honor and shame as motivating forces in Arab society, see Richard T. Antoun, *Arab Village: A Social Structural Study of a TransJordanian Peasant Community*, (Bloomington, IN: Indiana University Press, 1972), p. 97; Barakat, *The Arab World*, pp. 105-106, and 202; Berque, p. 32; Cohen, pp. 23-24; Hamady, pp. 34-35; Lutfiyya, *Baytin*, p. 17; Phebe Marr, "The Iraqi Village: Prospects for Change," in Lutfiyya and Churchill eds., p. 335; Pryce-Jones, pp. 35-40; Sharabi, "Impact of Class and Culture on Social behavior," p. 247; and Hisham Sharabi, "The Scholarly Point of View: Politics, Perspective, Paradigm," in Sharabi ed., *Theory, Politics and the Arab World*, p. 100

<sup>90</sup> Barakat, *The Arab World*, p. 24; Hamady, pp. 34-35; and Wikan, p. 123. In addition, Palmer et. al., found the same in their study of Arab bureaucracies, remarking that, "bureaucratic regulations in the Middle East focus on sins of commission rather than sins of omission. It is far more dangerous to stick one's neck out than it is to do nothing." Palmer, et. al., p. 19, also see p. 24.

<sup>91</sup> Sharabi, "Impact of Class and Culture on Social behavior," p. 249.

Similarly, Sania Hamady argues that, "Instead of striving toward doing the good, [the culturally-regular Arab] seeks only to avoid doing the disapproved."<sup>92</sup>

Indeed, in the patriarchal hierarchy of Arab society, it is normally the father--or father-figure--who is solely responsible for the well-being of the family--or the organization. Lichtenstadter sums this up succinctly in noting that "The father carries the full responsibility for the well-being of his family."<sup>93</sup> Thus only the father has the responsibility to take action. The only responsibility of the led is to obey the leader. Moreover, taking any action without the expressed consent of the leader would be disrespectful, and worse, might put the family or group on a different track from that which the father or leader would have chosen. Consequently, these two cultural criteria are strong forces prompting Arab subordinates to remain passive, and to act only when specifically ordered to do so.<sup>94</sup>

The net result of these various forces is that most Arabs tend to expect action and initiative to come from higher authority--the father, teacher, supervisor, boss. The powerful fear of shame combined with the expectation of complete obedience to authority encourage the led to not take any actions that are not specifically requested by higher authority. When a decision must be made, Arab culture stresses *Naql* (traditional authoritative transmission) from higher authority over *Aql* (reasoning) by subordinates.<sup>95</sup> US educators who have taught large numbers of Arab students report that a strong sense of shame makes many Arab students "timid and unadventurous."<sup>96</sup> The 1979 RAND study found that, among most Arabs, "Outcomes that are unfortunate are regarded as personal failures, whereas in other cultures they would be regarded as risks worth taking in the deliberate search for novel solutions."<sup>97</sup>

### Group Loyalty

Another highly valued trait of Arab society is group-solidarity and loyalty, particularly loyalty to family. As noted above, the family remains the basic unit of Arab society, generally superseding the individual in importance. At the end of the Second World War, many Arabs still lived in traditional dwellings that included much of their extended family, as well as their nuclear family. By the start of the 1990s, this pattern had become increasingly rare. However, even among middle- and upper-class urban Arab families, it remained quite common for members of the extended family to live nearby and to continue to treat the family as the primary support system and measure of identity for the individual.<sup>98</sup> Just as family ties persisted despite urbanization and other changes, so too did the importance of clan, tribe, and in some cases even village affiliations. As with the family itself, the shifting economic and residential pressures weakened these various institutions and their hold over the individual, however, their influence still remains significant throughout the Arab world.<sup>99</sup>

An interesting facet of the urbanization of Arab society, and the attendant changes in economics and demographics is that, in many cases, the neighborhood has begun to replace the clan or tribe in the lives of most Arabs. While it is true that many members of

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<sup>92</sup> Hamady, p. 34.

<sup>93</sup> Lichtenstadter, p. 607.

<sup>94</sup> Barakat, "Beyond the Always and the Never," pp. 144-146, Barakat, *The Arab World*, pp. 23-24; Lichtenstadter, p. 607; Sharabi, "Impact of Class and Culture on Social behavior," p. 249.

<sup>95</sup> Barakat, "Beyond the Always and the Never," pp. 152-153.

<sup>96</sup> Pascal, et. al., p. 27.

<sup>97</sup> Pascal, et. al., p. 34.

<sup>98</sup> On this point see Nawal Al-Messiri Nadim, "Family Relationships in a 'Harah' in Cairo, in Ibrahim and Hopkins, see esp. pp. 109-111.

<sup>99</sup> Ammar, esp. pp. 44-73; Antoun, *Arab Village*, throughout; Barakat, *The Arab World*, pp. 25, 38-39, 106, 201; Nadim, pp. 109-111; Rodinson, p. 150; Sharabi, *Neopatriarchy*, esp. p. 28.

the extended family live in the same neighborhood when possible, it is also the case that even where no kinship tie existed previously, residence in a common urban neighborhood has led to bonds of fellowship and community that traditionally only were extended to members of the same clan or tribe. In Barakat's words, "What the tribe is to the Bedouin and the extended family is to the village, neighborhoods and institutions are to the city."<sup>100</sup>

This last point illustrates an important element of the bonds of group solidarity and loyalty in Arab society. Although the family and other kinship groups--clan and tribe--are the primary poles of loyalty, there is a degree of flexibility involved. Distant cousins, friends, classmates, workers, and neighbors can develop bonds of loyalty as strong as any between the closest family members. The Arab proverb, "My cousin and I against a stranger, my brother and I against my cousin," is often used to illustrate the progressive "circles" of kinship and loyalty. The proverb enjoins Arabs to remain loyal to their kin against non-kin, but also to remain loyal to nearer kin rather than more distant relations when intra-family disputes arise. However, another Arab proverb reminds, "Your near neighbor before your distant brother." This second saying indicates that the ties of loyalty, while most often extended to kin, are not meant exclusively for kin. Rather, what is important is to extend loyalty to those most important to the individual's well-being--the people who make up the individual's primary support group. In many cases, friends, neighbors and co-workers will fall into this category in addition to, or in some cases even as substitutes for, family members. For example, in his study of Saudi college students, Levon Melikian found that in Saudi society, "Expectations of support from other members of the family and dependence upon them are generalized to one's closest friends."<sup>101</sup>

Because folk wisdom has it that only bonds of kinship can truly be counted on for loyalty in times of duress, kinship ties are sometimes fabricated, denied and manipulated as needed to accommodate social realities. Nieuwenhuijze states simply that, "Under certain conditions, the self-perpetuating process of family life may broaden out somewhat and embrace people who are not kin."<sup>102</sup> Two people living together in the same city who become close may fabricate a kinship tie as an explanation for their closeness, and to some extent, to cement the relationship.<sup>103</sup> Bedouin regularly alter genealogies and histories to show common ancestry between newly allied tribes, or to show that no kinship exists between new adversaries. For them, history is malleable and is made the servant of social and political needs.<sup>104</sup> Dale Eickelman relates that,

An ideological representation of tribal social organization is not necessarily based upon actual historical persons and is used primarily to explain contemporary social relationships. Ancestors not needed to provide links between actual groups are "forgotten," just as other linking forebears are "remembered" when realignments in present-day groups require the existence of a common ancestor to give form and legitimacy to their cooperation.<sup>105</sup>

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<sup>100</sup> Barakat, *The Arab World*, p. 62. Also see, Barakat, *The Arab World*, pp. 63, 201; Berger, p. 83; Hamady, p. 28; Hamamsy, pp. 71-72; Al-Khayyat, p. 11; Nadim, p. 111; Rodinson, p. 151.

<sup>101</sup> Melikian, "The Modal Personality of Saudi College Students," pp. 170-171. For additional support for the extension of loyalties beyond kin, see Ammar, p. 73; Barakat, *The Arab World*, p. 24, 57, 63; Eickelman, pp. 76, 110-116; Gellner, p. 69; Hamady, p. 28; Nieuwenhuijze, p. 388.

<sup>102</sup> Nieuwenhuijze, p. 390.

<sup>103</sup> Eickelman, pp. 110-116, specifically describes such behavior.

<sup>104</sup> Eickelman, p. 37.

<sup>105</sup> Eickelman, p. 76.

There is a slightly different dynamic among individuals than among groups. As has been well-catalogued, in the Arab world, loyalty to other members of a group, particularly members of a primary group such as the family or clan, is extremely strong. Because of the focus on the group as the primary actor, obligations of group members to one another are wide, varied, and extremely powerful. Sania Hamady observes that Arabs are often slow to make friends, particularly by Western standards, but are more often willing to make extreme sacrifices for their friends.<sup>106</sup> According to Abdulla Lutfiyya, in rural Jordan, "Loyalty to relatives is expected at all times and under all circumstances."<sup>107</sup> Laila El-Hamamsy reports that the same belief was evident among urban Egyptians, who universally asserted that a typical characteristic of the typical urban Egyptian is that, "He is deeply loyal to his kin and neighbors and is always there to help when needed."<sup>108</sup> In his study of Saudi students, Melikian found that these bonds extended to "cousins and uncles several steps removed," as well as, "one's closest friends."<sup>109</sup> Similarly, Halim Barakat writes that primary relations in the Arab world frequently result in life-long friendships and entail virtually unlimited commitments.<sup>110</sup>

While loyalties within groups are extremely strong, most commentators on the Middle East assert that ties outside the group are correspondingly weak. Most observers note a strict dichotomy in tribal society between members of the tribe and outsiders, who are generally suspected of being malevolent until proven otherwise. To a great extent, loyalties are defined in ever-greater circles of people: the family and other primary group members, the clan or the neighborhood, the tribe or the village, the religion or the region or even the ethnic group. At each level, a dispute between members of a group will coalesce support around the two parties based on lower sub-groups, so that--as the proverb says--a cousin will generally stand with his cousin against a non-kinsman, but a brother generally will stand with his brother against the cousin. Hisham Sharabi refers to this pattern of "nested" loyalties as "factionalism." As he describes it, "Factionalism is a privative tendency; it first separates the Self from all Others, then, on a higher level, divides the world into opposing pairs--kin and non-kin, clan and opposing clan, Islam and non-Islam, and so forth."<sup>111</sup> At each level, the individual defines himself or herself in terms of who is the same as him or her and who is not; to those who are the same, the individual will feel great loyalty, to those who are not, the individual will feel little or no obligation. Of course, the degree of loyalty and obligation will diminish as one moves increasingly farther from the primary group, but the extent of that diminution appears to be idiosyncratic and situation-dependent.<sup>112</sup>

### Manipulation of Information

The dominant Arab culture places a premium on politeness and socially "correct" behavior. A failure to act politely and appropriately to others in all situations is considered extremely shameful. In addition, the bonds of loyalty described above enjoin the individual to place the needs of kin and friends ahead of any responsibility to the abstract concept of "truth." Many sociologists have linked these tendencies with the

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<sup>106</sup> Hamady, p. 56.

<sup>107</sup> Lufiyya, *Baytin*, p. 177.

<sup>108</sup> El-Hamamsy, p. 71-72.

<sup>109</sup> Melikian, "The Modal Personality of Saudi College Students," pp. 170-171.

<sup>110</sup> Barakat, *The Arab World*, p. 24. For further evidence on this point, see Ammar, p. 47, 73; Barakat, *The Arab World*, pp. 98-100; Cohen, p. 23; Eickelman, pp. 110-116; Gardner, pp. 24-25; El-Hamamsy, p. 75; Hamady, p. 29; Stephen H. Longrigg and Frank Stoakes, "The Social Pattern," in Lutfiyya and Churchill eds., p. 67; Pryce-Jones, pp. 19-21; Sharabi, *Neopatriarchy*, p. 28.

<sup>111</sup> Sharabi, *Neopatriarchy*, p. 28.

<sup>112</sup> Gellner, p. 69; Sharabi, *Neopatriarchy*, p. 28.



powerful injunctions favoring conformism and obedience to authority.<sup>113</sup> The heavy emphasis on ensuring social harmony often takes precedence over the accurate transmission of information with the result that being polite and loyal in the Arab world often requires conscious distortions, because to do otherwise would be shameful. While these traits have brought the Arabs an unrivaled reputation for courtesy, loyalty, and hospitality, they are fostered at the expense of others. In particular, they contribute to a general tendency to manipulate and compartmentalize information.

One of the most commonly cited manifestations of such behavior comes in the form of saying "yes" when one really means "no." This trait is reflected in the Arabic term *Taqiyyah*, which means dissembling, and more specifically the denial of certain feelings and beliefs to avoid persecution.<sup>114</sup> As Hamady bluntly states, "The Arab avoids a blunt refusal to any demand. He tries to get around the word 'no.'"<sup>115</sup> Because it would be shameful and impolite to tell a superior that something he or she has requested cannot be done, subordinates may agree to do things they recognize are impossible. "When the individual is unable to accomplish the task he will have no recourse available but to prevaricate, invent excuses, or fail to appear."<sup>116</sup> The 1979 RAND study found that in interviewing US educators who had taught Arab students, the professors indicated that Arab students often evince a much higher rate of cheating than their American counterparts because to refuse to help a classmate is considered shameful among the Arab students.<sup>117</sup> In situations where something bad has befallen an individual, the tremendous aversion to shame may produce tendencies to exaggerate the obstacles the individual encountered when attempting to perform the deed.<sup>118</sup>

Fear of dishonor also contributes to tendencies toward secrecy and compartmentalization of knowledge. In order to conceal mistakes that would result in shame, features of Arab culture encourage the individual to remain secretive. In Arab society, it is generally the case that one accounts for actions not to God but to society. Hamady cites several Arab proverbs in this vein: "He who has done a shameful deed must conceal it for revealing one disgrace is another disgrace," and, "A concealed sin is two-thirds forgiven."<sup>119</sup> Raymond Cohen encapsulates this cultural pattern in the following:

Loss of face, to be shamed before one's peers, is an excruciating penalty which one seeks to avoid at all costs. Once again, child-rearing practices condition the individual from an early age to acute awareness of the norm. Punishment is administered in public and intensified by deliberate belittlement or ridicule. The humiliation is worse than the pain or the admonition itself. The effect of the punishment, one may conclude, is not simply to discourage misbehavior as such but to inculcate an abiding aversion to being disgraced in front of the group. In effect, the child is taught that the penalty for wrong-doing is public disgrace rather than a sense of personal remorse. He is conditioned, therefore, to escape humiliation as much as sin. Since shame results from being found out and ridiculed, it can be avoided as well by concealment as by rectitude.<sup>120</sup>

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<sup>113</sup> see for example, Barakat, *The Arab World*, p. 25; Berger, p. 144; Hamady, p. 62; Pryce-Jones, p. 41; Wikan, p. 123.

<sup>114</sup> Barakat, *The Arab World*, p. 25.

<sup>115</sup> Hamady, pp. 71-72.

<sup>116</sup> Pryce-Jones, p. 41.

<sup>117</sup> Pascal, et. al., p. 27.

<sup>118</sup> Hamady, pp. 45-46; Harkabi, pp. 687-688;

<sup>119</sup> Hamady, p. 36-37.

<sup>120</sup> Cohen, p. 23.

Sharabi notes the same behavior:

In practice, shame ('Ayb) is what "people say" (*shu bi'ulu n-nas*). The implication is clear: what people do not see or hear is all right. This is not merely to distinguish what one does and what one ought to do; it involves an attitude of concealment. In adult behavior this develops into an unthinking habit of hiding one's intentions and of being on guard in what one says; actions cease to be what they seem; there is always a hidden meaning, an unrevealed purpose behind every word and every gesture.<sup>121</sup>

In her study of the slums of Cairo, Unni Wikan notes that poor Egyptians believed that, "The best protection for a man is to practice information control--by keeping other people at arms length--and by 'stopping friends/acquaintances coming to your home.' Each visit offers the guest the possibility of going out and revealing the family's secrets, saying that 'the furniture was ugly, the wife was ugly, etc.'"<sup>122</sup> One Saudi college student observed that, "Every person has two characters, one he displays in public, the other in his private life. Thus when given a chance to do things that are forbidden by religion (without being exposed) one does not force himself not to do it."<sup>123</sup> Moreover, the Orientalist Morroe Berger asserts that, "Arab secretiveness also extends to facts that one is not necessarily ashamed to reveal."<sup>124</sup>

The fear of shame generates great pressure to shift blame for even the most routine errors. Because being at fault is considered so dishonorable, there is a powerful incentive to shift responsibility for problems away from oneself--and often from others--and to distort or even falsify to serve this purpose. In his study of Lebanese village life, Michael Gilsenan concluded that, "*Kizb*, the Arabic word translated here as 'Lying,' is a fundamental element not only of specific situations and individual actions, but also of the [Arab's] cultural universe as a whole; and that, further, it is the product of, and produces in turn, basic elements and contradictions in the social structure."<sup>125</sup> Barakat comments that within the ubiquitous Arab social hierarchies, "upward communication may be accompanied by crying, self-censorship, obfuscation, and deception."<sup>126</sup> The Lebanese psychiatrist Haig Katchadourian concluded that the fear of dishonor often leads to such evasion and subterfuge that an individual's adopted "mask" becomes indistinguishable from his true self because the individual tends to lose track of the distinction.<sup>127</sup>

### Atomization of Knowledge

Orientalists have used the term "Atomization of Knowledge" to describe a tendency among Arabs to see knowledge as a grouping of discreet details without recognizing the connections between those details. It is an overattention many Arabs show to minute detail, "without integrating them into a composite and well-organized whole."<sup>128</sup> Bernard Lewis refers to the "Tendency to view life and the universe as a series of static, concrete, and disjunct entities, loosely linked in a sort of mechanical or

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<sup>121</sup> Sharabi, "Impact of Class and Culture on Social Behavior," p. 249.

<sup>122</sup> Wikan, p. 49. See also p. 123.

<sup>123</sup> Melikian, "The Modal Personality of Saudi College Students," p. 172.

<sup>124</sup> Berger, p. 144. See also, Ammar, p. 230; Binder, p. 411; Hamady, pp. 100-101; Sharabi, "Impact of Class and Culture on Social Behavior," pp. 249, 255.

<sup>125</sup> Michael Gilsenan, "Lying, Honor, and Contradiction," in Bowen and Early eds., *Everyday Life in the Muslim Middle East*, pp. 157-158.

<sup>126</sup> Barakat, *The Arab World*, p. 106.

<sup>127</sup> Cited in Pryce-Jones, p. 44. See also, Ajami, p. 49; Barakat, *The Arab World*, p. 25; Cohen, p. 24; Hamady, pp. 34-37; Pryce-Jones, pp. 35-44; Wikan, p. 123.

<sup>128</sup> Hamady, p. 209.

even casual association by circumstances or by the mind of an individual, but having no organic interrelation of their own."<sup>129</sup> Lewis believes this perspective brings many Arabs to view knowledge as composed of discrete, unrelated elements. Many Arabs do not see disciplines of knowledge as related and overlapping, but as "Separate and self-contained compartments holding a finite number of pieces of knowledge, the progressive accumulation of which constitutes learning."<sup>130</sup> Lewis specifically applies this problem to traditional Arabic literature, which, "devoid of epic or drama, achieves its effects by a series of separate observations or characterizations, minute and vivid, but fragmentary, linked by the subjective associations of author and reader, rarely by an overriding plan."<sup>131</sup> The result of this tendency is a greater difficulty moving from the specific to the general and grasping the whole as more than the sum of its parts.

This tendency has been noted by a number of other Middle East experts as well. Morroe Berger has commented that Arab philosophy is characterized by an inability to take a complete, organic view of human experience," and that, "Arab Moslem civilization has emphasized structure, repetition, and perfection in detail at the expense of meaning, originality, and the joining of parts into a related unity."<sup>132</sup> Similarly, Manfred Halpern concurs with H. A. R. Gibbs' remark regarding the, "Atomism and discreteness of the Arab imagination."<sup>133</sup> According to Hamady, many Arabs have a proclivity to dwell on irrelevant details, "while the main and essential parts are disregarded." Hamady cites Arab poetry, in which the author describes details with "inimitable poignancy," but fails to portray the entirety of the person or object, and Arab folk tales, "Which show no consistency of sentiment or content, lacking organic continuity, they are a mere 'string of episodes.'"<sup>134</sup> In his 1980 study of Jordanian civil servants, Jamil Jreisat found that they were preoccupied with "small and routine matters, but were unable to even suggest answers to the larger bureaucratic issues facing their departments."<sup>135</sup>

Closely related to the atomization of knowledge, and in part an outgrowth of it, is the difficulty which many Arabs experience with interdisciplinary subjects. A rigid teaching style that relies on rote memorization and the tendency to atomize knowledge hinders many Arabs in seeing relationships between seemingly disparate subjects. As one manifestation of this proclivity, the 1979 RAND report cited studies of Arab and American students in which the Arabs scored significantly higher in vocabulary tests than they did in tests based on analogies. The vocabulary tests basically measured the ability to memorize information, whereas the analogy tests measured the ability to generalize.<sup>136</sup>

### **Personal Courage**

Within the dominant Arab culture, an important element of a man's honor is his courage. "Manliness" is a highly regarded commodity in the Arab world. Manliness includes injunctions to come to the aid of family and friends no matter what the circumstances, an element of the group loyalty of the society. Of equal importance are notions of personal bravery and a willingness to bear extreme hardships. Maxime

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<sup>129</sup> Bernard Lewis, *The Arabs in History*, Revised Edition, (NY: Harper, 1966), p. 141.

<sup>130</sup> Lewis, p. 142.

<sup>131</sup> Lewis., p. 142.

<sup>132</sup> Berger, p. 159. The Orientalists, Lewis in particular, have embraced the notion of the atomization of knowledge more wholeheartedly than the Arabists. However, for Arabist views that generally support the notion of atomization of knowledge--albeit without the same enthusiasm as Lewis--see Ajami, p. 186; Barakat, "Beyond the Always and the Never," p. 144; Barakat, *The Arab World*, p. 275; Gellner, pp. 124-125; and Rodinson, p. 168.

<sup>133</sup> Halpern, *The Politics of Social Change in the Middle East . . .*, p. 355.

<sup>134</sup> Hamady, pp. 209-211.

<sup>135</sup> Jreisat, p. 100.

<sup>136</sup> Pascal, et. al., p. 27.

Rodinson refers to a "cult of honor," that includes strength, material or moral power, courage, and the "capacity and the will to defend the independence of the group and the chastity and freedom of its women."<sup>137</sup> In a similar fashion, Laila El-Hamamsy points to the values of *Shahamah*--gallantry, boldness, nobility--as well as *Muruwwah*--courage, fierce loyalty to one's kin, generosity and hospitality--both of which are synonymous with manliness.<sup>138</sup> Many Middle East scholars attribute these values to the Bedouin codes that dominated the Arab world after the birth of Islam in the seventh century.<sup>139</sup> In many ways, Bedouin values continue to remain at the heart of certain Arab cultural ideals. Personal bravery and stoic endurance were important for survival in the merciless climate of the desert, and these values were adopted by the larger settled populations.

Numerous sociologists--as well as casual observers--have noted that the ideals of courage exert a considerable influence on the actual behavior of Arab men. Along with group cohesion and honor, Mansur Khalid includes endurance, in the form of self-control and physical and moral discipline as one of the three values most important to Arab society.<sup>140</sup> El-Sayyid Yassin has similarly cited "patience and perseverance in the face of hardship" as a defining trait of the culturally-regular Egyptian persona.<sup>141</sup> Themes of the need for toughness and personal courage pervade the various studies of Arab village life in Egypt by Hamed Ammar, in Iraq by Phebe Marr, and in Jordan by Richard Antoun and Abdulla Lutfiyya.<sup>142</sup> The same themes are echoed--albeit in subtly different forms--in the work of Nawal Nadim and Unni Wikan on urban populations in Egypt.<sup>143</sup> "Arab society is ruthless, stern, and pitiless. It worships strength and has no compassion for weakness. It expects a great deal of the individual and when he fails it treats him harshly. . . . Arab society is not kind, and rarely forgiving," is Hamady's verdict on this topic.<sup>144</sup> Finally, John Bagot Glubb (of Arab Legion fame) wrote with characteristic enthusiasm that, "With the Arabs in particular, it is vital to remember the existence of a capacity for passionate and heroic courage concealed beneath their everyday venality. . . . All of a sudden appears a cause or a leader possessing the flaming quality which can inspire the exalted courage that lies hidden deep in the Arab character. Suddenly they throw away money in disgust or exaltation, and develop a courage which staggers, if it does not sweep away, their astonished opponents."<sup>145</sup> Glubb's romanticism aside, the more sober assertions of other authors make it clear that a sense of personal bravery and a willingness to solemnly endure hardships remain an important element of the culturally-regular Arab persona.

### **Aversion to Manual Labor and Technical Work**

The last pattern of culturally regular Arab behavior I consider is the prevailing aversion to manual labor and technical work. Essentially, Arab society as it has developed over the centuries concluded that manual labor was dishonorable.<sup>146</sup> "There is

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<sup>137</sup> Rodinson, p. 164.

<sup>138</sup> El-Hamamsy, pp. 71-73.

<sup>139</sup> See Barakat, pp. 52-53; Berger, p. 49; Hamady, p. 199;

<sup>140</sup> Mansur Khalid, "The Socio-cultural Determinants of Arab Diplomacy," in Atiyed ed., *Arab and American Cultures*, p. 127.

<sup>141</sup> In Cohen, p. 22.

<sup>142</sup> Ammar, *Growing Up in an Egyptian Village*, op. cit.; Antoun, *Arab Village*, op. cit.; Lutfiyya, *Baytin*, op. cit.; and Marr, "The Iraqi Village, Prospects for Change," op. cit. Note that Barakat has the same interpretation of Ammar's book. Barakat, "Beyond the Always and the Never," p. 142.

<sup>143</sup> Nadim, "Family Relationships in a 'Harah' in Cairo," op. cit.; Wikan, *Life Among the Poor in Cairo*, op. cit.

<sup>144</sup> Hamady, p. 38.

<sup>145</sup> John Bagot Glubb, *The Story of the Arab Legion*, (NY: Da Capo, 1976), p. 253.

<sup>146</sup> Barakat, *The Arab World*, p. 53; P. A. Kluck, "The Society and its Environment," in Richard F. Nyrop,

a common and very deep-seated feeling that manual or rural forms of work mean drudgery and nothing more; that furthermore, there is an element of degradation in them, so that they must be avoided by all and any means," according to John Gulick.<sup>147</sup> Gellner observes that the crafts of most artisans, such as blacksmiths and dyers, are "morally suspect," and Arabs have tended to leave such occupations to foreigners.<sup>148</sup> Hamady bluntly states that, "The Arab is utterly contemptuous of all manual labor, be it on the farm, in the factory, or in other contexts," and, "Arab society despises manual work: members of traditional families would prefer to starve than to be shamed by engaging in a humble occupation."<sup>149</sup> Berger noted that, "The prejudice against technology and engineering is still intense and the attraction of clerical work, administration, and law very strong."<sup>150</sup> Fahim Qubain said of technical and vocational training in the Arab world, "For untold generations a strong prejudice has existed throughout the Middle East against hard work. It was regarded as undignified, degrading, and menial. . . . With the gradual rise of industry, the disdainful attitude toward vocational training and manual labor has begun to wane, but it is still very much in evidence."<sup>151</sup>

Although it is certainly true that many cultures consider manual labor to be a less desirable occupation than a managerial position, Arab culture seems to show a much stronger tendency in this direction. In addition, until the last decade or so, Arab culture appears to have included in the category of "manual labor"--and therefore dishonorable--professions such as medicine and engineering which are considered extremely prestigious in other societies. Finally, there appears to be a consensus among Middle East experts that Arabs are generally more willing to sacrifice material benefits (specifically better pay and other benefits) to avoid the taint of taking a job considered as "manual labor," than most peoples. The former personnel adviser to the Iraqi Petroleum Company remembered that, "While Iraqi oilfield laborers were eager to educate their children, they were reluctant to have them learn technical skills which were in *tremendous* demand and therefore offered very significant material rewards."<sup>152</sup> Bowen and Early have written that in the Arab countries, "While white-collar jobs may bring prestige, skilled and unskilled labor are in higher demand and in many cases bring higher salaries than do positions as clerks, professionals, and bureaucrats."<sup>153</sup> A recent Egyptian government study found similar results: Egyptian children were very reluctant to go into technical occupations. They sought out white-collar jobs over blue-collar jobs, "even though the latter type of occupation provided more opportunities, better pay and promotion."<sup>154</sup>

A number of authors argue that Islam, as it has come to be taught--although not necessarily as it was originally conceived--actively works against the spread of rationalism and technical knowledge. This has translated into the teaching of science by rote memorization with little attention to scientific methods of inquiry in many Arab

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*Saudi Arabia: A Country Study*, Fourth Edition, (Washington, DC: Government Printing Office, 1984), p. 125; Pascal, et. al., pp. VIII, 27; Pryce-Jones, p. 268; Mohamed Rabie, "The Future of Education in the Arab World," in Hudson ed., *The Arab Future*, pp. 23-27; also see Milton Viorst, *Sandcastles: The Arabs in Search of the Modern World*, (NY: Alfred A. Knopf, 1994), p. 246.

<sup>147</sup> John Gulick, "Two Streams into One," in Lutfiyya and Churchill eds., p. 342.

<sup>148</sup> Gellner, p. 88. Dana Adams Schmidt found the same sentiments in the Yemen. Dana Adams Schmidt, *Yemen: The Unknown War*, (London: The Bodly Head, 1968), p. 71.

<sup>149</sup> Hamady, pp 147 and 38.

<sup>150</sup> Berger, p. 405.

<sup>151</sup> Fahim I. Qubain, *Education and Science in the Arab World*, (Baltimore, Md: Johns Hopkins University Press, 1966), p. 25.

<sup>152</sup> E. A. Kinch, "Labour Problems in the Early Days of the Industry," in Lutfiyya and Churchill eds., p. 358. Emphasis in original.

<sup>153</sup> Donna Lee Bowen and Evelyn A. Early, "Home, Community and Work: Introduction," in Bowen and Early eds., *Everday Life in the Muslim Middle East*, p. 126.

<sup>154</sup> Hopwood, *Egypt*, p. 139.

primary and secondary schools. Pervez Hoodbhoy despairs that, "Although Muslims form one-fifth of the world's population, they are barely noticeable in the world of scientific research, and Muslim countries are the most abjectly dependent among developing countries upon Western technology and know-how."<sup>155</sup> Indeed, no less a scholar than Albert Hourani has written that in the dramatic expansion of education following independence in the 1950s, "there was a tendency to concentrate on academic education which would lead to government service or the liberal professions," because, "the use of the hands as well as the mind, was alien to the concept of education," in Islamic culture.<sup>156</sup>

Of course, most Arabs are forced by economic necessity to swallow such pride and engage in manual labor. However, where this behavioral trait is most important for military performance is in the field of education. Because the middle and upper classes of Arab society can afford the luxury of pride, their children--who are more likely to be educated than those of the lower classes--opt for careers in more prestigious, non-technical fields. Indeed, until very recently, Arab students generally showed little interest in pursuing further studies in engineering or the sciences. Arab law schools, however, continue to overflow with applicants.<sup>157</sup> Derek Hopwood, in his overview of Egyptian society, reports that there still exists a glut of university majors in "non-productive subjects" and a drought of engineers and "technologists."<sup>158</sup> Likewise, in his companion study of Syrian society, Hopwood wrote that technical training is "often regarded as an inferior form of education in which those enroll who are unsuccessful in general education. . . . [Technical] training has tended to attract the drop-outs of the general educational system and the academically less intelligent, and has carried the stigma of being the last resort of those unsuccessful in educational terms."<sup>159</sup> Wilson and Graham found the same patterns among Saudi students--who preferred Islamic studies to medicine or engineering, because Islamic studies was more "noble" according to Saudi culture--as did P.J. Vatikiotis in his study of Jordanian civil-military relations.<sup>160</sup> Joseph Jabbra also observed this phenomenon, remarking that, "For a long period of time and for cultural and cost reasons, the Arab world has neglected technical fields of study. This situation has resulted in a shortage of qualified technical people and a surplus of people in the social sciences and the humanities."<sup>161</sup> Constantine Zurayk also bemoaned an "absence of a scientific spirit and a predominance of literary concerns in intellectual life," in Arab society.<sup>162</sup> To place this trait in a quantitative context, in 1979, Mohamed Rabie found that 50 percent of all university graduates in the Arab world were in the humanities or law, "leaving Arab societies in dire need of expertise in almost all technical fields."<sup>163</sup> Similarly, the 1979 RAND study noted that few of the Arab students who studied abroad pursued scientific or technical education.<sup>164</sup> Only in the last ten or fifteen years does this trend appear to have begun to change with increasing numbers of Arab students pursuing careers in medicine and engineering.

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<sup>155</sup> Hoodbhoy, p. 50.

<sup>156</sup> Albert Hourani, *A History of the Arab Peoples*, (Cambridge, MA: Belknap Press, 1991), p.391.

<sup>157</sup> Hoodbhoy, pp. 124-126; Pascal, et. al., 23-25.

<sup>158</sup> Hopwood, *Egypt: Politics and Society, 1945-1990*, p. 141.

<sup>159</sup> Derek Hopwood, *Syria, 1945-1986: Politics and Society*, (London: Unwin Hyman, 1988), p. 125.

<sup>160</sup> Wilson and Graham, p. 28; and P. J. Vatikiotis, *Politics and the military in Jordan*, (London: Frank Cass and Co. Ltd., 1967), p. 25. Kluck's assessment of Saudi education agrees in full with Wilson and Graham, Kluck, pp. 125-126.

<sup>161</sup> Joseph G. Jabbra, "Bureaucracy and Development in the Arab World," *Journal of Asian and African Studies*, Vol. XXIV, No. 1-2, 1989, p. 4.

<sup>162</sup> Faris, p. 13.

<sup>163</sup> Rabie, p. 23.

<sup>164</sup> Pascal, et. al., pp. 23-24.

One important result of this aversion to technical subjects is a dearth of scientists working in the Arab world, as well as the relative poverty of the work they produce. In his 1980 study, *Science and Science Policy in the Arab World*, A. B. Zahlan presents a compelling argument that, to some extent, the Arab world produces comparatively fewer trained scientists and engineers than other regions of commensurate wealth and development and, of greatest importance, these scientists and engineers produce far less *quality* work than their colleagues elsewhere in the world. For example, Zahlan notes that on a per capita basis, Arab scientific contributions (measured in terms of numbers of scientists publishing in scientific journals per year) were 1 percent of the Israeli contribution in 1980. Likewise, Zahlan argues that based on the global average, the 7,000 scientists and engineers in the Arab world in 1973 should have produced between 8,000 and 14,000 papers that year, but they actually produced only 847. He concludes, "No matter what method is utilized to assess the productivity of scientific workers, the gap between what is actually produced and what is to be expected from the research and development manpower and the academic staff of existing institutions is exceedingly large."<sup>165</sup> Zahlan also condemns the quality of what little scientific work is published in the Arab world: "The work reported in the basic sciences is actually poor and limited in scope. . . . Most of the work is relatively dull and routine, and seems to be out of touch with activity and progress elsewhere. The pages of most of the professional journals attest to the notable absence of scientific contributions from Arab institutions."<sup>166</sup>

### **Hypotheses and Predictions of the Theory**

Having described the major elements of my independent variable, it is now possible to flesh out the theory beyond the general statement that Arab culture shapes Arab military effectiveness. By definition, the features of the dominant Arab culture listed above create persistent patterns of behavior among Arabs on a constant basis in nearly all aspects of their daily lives.<sup>167</sup> In other words, Arab culture influences how

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<sup>165</sup> Zahlan, p. 31.

<sup>166</sup> Zahlan, p. 28. While Zahlan's work is clearly the most comprehensive treatment of the topic, concurring views can be found in Pascal, et. al., pp. 28-34; Sharabi, *Neopatriarchy*, p. 81; and Michael J. Simpson, "The Prospects of Technological Growth in Arab Societies: An Analysis of the Potential for Progress Toward Technological Autonomy in the Arab World, 1985-1995," in Sharabi, *The Next Arab Decade*, pp. 132-133.

<sup>167</sup> Indeed, patterns of behavior congruent with these cultural traits have been noted by authors across the spectrum of institutions in the Arab world. For example, Middle East experts have remarked that entrepreneurship is badly stunted in the Arab world because of the prohibitions against innovation and initiative among subordinates in a hierarchy. These problems are cited as the primary culprits in the failure of industrialization in the Arab world. Jacques Berque notes that Arabic has no word for enterprise or entrepreneur, suggesting that the concept is foreign to Arab society. [Berque, p. 117] Professor Yusef Sayigh of American University of Beirut argued in his dissertation that Arab culture acts as a restrictive and even repressive influence on entrepreneurship. [Berque, p. 118] Berque also despairs that what little industry has developed in the Arab world has almost invariably been the product of government fiat because cottage industries never spring up in the Arab countries. Instead, industrialization must be initiated and directed by the highest levels of the bureaucracy. [Berque, pp. 128-129] A. B. Zahlan has documented the overwhelming tendency for Arab states to purchase "turn-key" factories to compensate for an inability to build and organize a major industrial enterprise. Zahlan also writes that Arab "Technical institutions often merely specialize in compiling ideas generated by consultants," and then must have foreign firms execute these ideas because Arab firms are incapable of doing so. [Zahlan, p. 19.] According to Peter Wilson and Douglas Graham, virtually *all* of Saudi Arabia's most successful industrial ventures are staffed by Western managers and Asian workers, because the Saudis are unwilling to serve as the latter and incapable of serving as the former. [Wilson and Graham, p. 217.] Similarly, Derek Hopwood criticizes

Arabs behave in virtually all activities. Consequently, I argue that it is highly likely that these same influences should be expected to have similar effects on how Arab soldiers and officers act in combat. Indeed, it would be surprising if these patterns of behavior did not manifest themselves in Arab military operations--after all, Arab militaries ultimately are composed of Arabs. It follows then that the specific characteristics of the dominant Arab culture enumerated above should produce corresponding patterns of behavior among Arab armies and air forces. Thus from the list of Arab cultural traits developed in the first part of my methodology, we can now infer specific, testable hypotheses about Arab military performance as it should be influenced by these characteristics of the dominant Arab culture.

### **Creativity and Innovation**

Perhaps the clearest prediction we can infer is that the general cultural injunctions in favor of conformity at the expense of creativity and innovation should produce the same general phenomena among Arab military units. It appears self-evident that the promotion of conformity at the expense of innovation, adherence to traditional patterns of behavior, and the fear of deviating from those patterns of behavior that are important facets of the dominant Arab culture should *dampen innovation and encourage dogmatic adherence to tactical doctrine*. This should be especially prevalent among the lower ranks because Arab senior commanders, functioning as leaders (effectively, father-figures) in traditional hierarchies, would be expected to make decisions for the entire group, whereas junior officers, as the subordinates in a traditional hierarchy would be expected simply to obey the orders of their superiors. Thus Arab tactical units should mostly just drive straight at the enemy when ordered to attack, and should likewise employ simple frontal assaults when counterattacking. Arab formations should have difficulty reorienting themselves or otherwise adapting to unforeseen developments on the battlefield, such as when their defensive lines have been penetrated by an adversary. Arab armies and air forces also should have great difficulty improvising counters to unexpected weaponry or tactics employed by their opponent. Although Arab armies should be expected to learn from their mistakes, this should be a slow and difficult process in which the senior levels of command must identify the problem, formulate the solution and then retrain the lower echelons to perform the new technique.

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Syrian business management as being "authoritarian," and showing little ability to perform the internal criticism crucial to success in business. Hopwood also cites a 1954 World Bank report that concluded that Syria suffered from inefficient management practices, which Hopwood argues continue to exist today. [Hopwood, *Syria*, pp. 104-110].

Studies of Arab bureaucracies show the same patterns of behavior. For instance, Wilson and Graham note that Saudi bureaucrats are adamantly opposed to any change that might clash with cultural values. [Wilson and Graham, p. 205.] In his travels in the Middle East, David Lamb found that lower levels of Arab bureaucracies were notoriously inefficient, and as a result, the (fairly capable) ministers were horribly overworked attending to all of the minutiae that their staffs were unwilling or unable to perform. [David Lamb, *The Arabs*, (NY: Vintage Books, 1988), p. 248.] Finally, in a special issue of the *Journal of Asian and African Studies*, a group of Western and Arab social scientists who had studied various Arab bureaucracies came to the consensus that, even when compared to other bureaucracies, the Arab institutions were severely hampered by problems of initiative, creativity, overcentralization of authority, atomization of knowledge, an absence of rationality, a dearth of technically qualified personnel, and the constant manipulation of information. Moreover, virtually all of the authors found that these problems were rooted in the patterns of behavior characteristic of the dominant Arab culture. [See the various articles in the *Journal of Asian and African Studies*, Volume XXIV, No. 1, 1987.]

As one last example of how these cultural traits have influenced other Arab institutions I offer the following description of Iraq's clandestine intelligence service, the *Mukhabarat*, cited by the Iraqi dissident, Kanan Makiya. Makiya writes that Iraqi agents are recommended tactics that "suggest that the authors of the plan are not convinced that their men in foreign capitals will know how to buy a newspaper unless every detail of the transaction is spelled out for them." [Makiya, p. 13.]



### **Information Flows**

The strong tendencies to avoid giving offense and to shift blame through secrecy, exaggeration, deception or dissembling is likely to result in *poor transmission of information along the chain of command*. Subordinates should regularly conceal, mislead or lie to their superiors about even fairly minor reversals. In addition, we should expect to find that superiors are reluctant to provide information to subordinates, preferring to retain the control that more extensive information bestows.

### **Initiative**

The overwhelming fear of shame evinced by Arabs in all aspects of daily life--and the concomitant belief that to do nothing is better than to risk doing something wrong--creates considerable passivity, especially among subordinates in hierarchical organizations. This tendency toward passivity within the patriarchal hierarchies of Arab society should be expected to produce an *aversion to taking initiative* among Arab military personnel that increases as one moves down the chain of command. Enlisted personnel and junior officers, as the subordinates in a patriarchal hierarchy, should be the most passive while general officers, as the "patriarchs," should be most willing to try to seize fleeting opportunities.

All decisions in Arab armies should be referred up to the highest levels of command for decisions, thereby greatly slowing down the pace of operations at which Arab units are able to act. Arab tactical formations should be reluctant to act on their own in response to the vicissitudes of combat. Arab tactical units should frequently fail to launch timely counterattacks, they should consistently miss fleeting opportunities which arise during combat, and should be slow to react to unforeseen moves by their adversary. Arab units whose communications links to higher authorities are disrupted should be expected either to continue doing what they were doing or else to do nothing, being uncertain as to what their superiors would want. It should not necessarily be the case that Arab units whose communications are cut would panic and run.

### **Centralization of Authority**

The rigid hierarchy and strict patriarchy prescribed by the dominant Arab culture should also translate into a *heavily centralized, top-down decision-making* process in Arab chains of command. It also seems reasonable to expect that within Arab militaries, tendencies toward passivity and overcentralization should be mutually reinforcing: junior officers may not show initiative because they are not delegated the authority that would allow them to do so, and senior officers may not delegate authority because their subordinates have not shown the initiative to merit it. As with passivity, Arab militaries ought to be rigid and inflexible. All decisions should be referred up to the highest levels of the chain of command for decisions, thereby greatly slowing the pace at which Arab armies can operate. Arab armies should regularly miss battlefield opportunities and fail to react quickly to sudden moves by their adversaries because of the need for higher approval before any action can be taken.

### **Maneuver**

Because maneuver is an inherently creative act, Arab forces should prove *reluctant to maneuver actively* on the battlefield. The use of maneuver on the battlefield to gain an advantage over the adversary requires that the commander be able to imagine a situation different from his present situation, one in which he has an advantage over his enemy derived from a different spatial arrangement. It demands that the commander quickly develop an operational plan that will allow him to place his forces into the newly imagined, spatially-advantageous position and that anticipates the likely reactions of his adversary. It seems likely that such actions would not come naturally to a product of the various pressures of Arab society. Men taught not to act creatively and not to imagine

things different from how they are, probably would not easily take to the idea of attempting to purposely create a new situation--even one advantageous to themselves. Indeed, the idea of altering the situation through maneuver might not occur to them at all. Consequently, Arab units ought to opt for simple, direct thrusts straight at the enemy, rather than more complicated flanking and enveloping maneuvers in all situations.

### **Employment of Armor**

The same problems derived from the neglect of creativity and initiative fostered by the dominant Arab culture should make it difficult for Arab armies to get the maximum advantage from their armored forces. Arab armies should show *little ability to handle armor flexibly* and to operate tanks creatively to get maximum benefit from them. In addition, the tendency to "atomize" knowledge suggests that Arab armor officers may fail to grasp that different circumstances require different things from them. For example, although Arab armor personnel may understand that tanks are most useful when they can move unhindered and are easy targets when attacked from close range in the flank and rear, the same personnel may not necessarily recognize that urban or wooded environments will create situations that will hinder movement and provide opportunities for close-range shots at their tanks from the flank and rear.

Consequently, we should expect to find Arab armies employing their tanks mostly as battering rams or mobile cannon. Arab tank crews should be unlikely to maneuver for advantage against their enemy, to actually "stalk" other tanks to get the best shot, and instead should try to rely mostly on sheer firepower and armored strength to overpower an enemy. In addition, we should find that Arab armies frequently send armored forces into terrain in which the tanks are highly vulnerable. It may also be the case that because some manual advised that certain kinds of terrain are unsuitable for mechanized movement, Arab militaries will deem terrain impassable to their adversary when this is not actually the case.

### **Employment of Artillery**

Several of the patterns of behavior emphasized by the dominant Arab culture should produce significant problems in artillery operations. The discouragement of creativity, the tendency toward passivity among subordinates within a hierarchy, the overcentralization of authority, and the manipulation of information all suggest that Arab forces should *utilize artillery inflexibly*. That is, while Arab armies may do fine when conducting predesignated fire-missions as part of a preliminary bombardment--missions they will have had time to plan in detail and for which they likely will already have been able to register their guns--they are likely to have difficulty with more complicated missions. In particular, on-call fire support and other fire missions requiring sudden, unforeseen retargeting should prove problematic. Manipulation of information plus problems with tactical intelligence (see below) are likely to make it difficult for artillery units to actually know where friendly and enemy forces are. A rigid hierarchy and passivity at junior levels likely will mean that all requests for fire-support need to go up a lengthy chain-of-command to an overburdened command staff and then back down to the artillery units before the support is provided. Finally, an unwillingness to change or to improvise will likely make reorienting fire in a new direction--perhaps to an unexpected target or location--very difficult.

The result of all this ought to be artillery fire that is inflexible, unresponsive to the needs of units in combat, and inaccurate when redirected onto targets that were not previously designated and planned for well in advance. As a result, Arab artillery should do fine when conducting laboriously planned preliminary bombardments--including time-phased "creeping barrages," as long as they have been planned well in advance and the gunners can adhere to a detailed script. They also ought to perform adequately when they have sufficient tubes to simply saturate a target with fire. However, they should experience great difficulty shifting their fire in response to the fortunes of battle, they

should be unable to effectively alter or modify existing plans, and should be very inaccurate when attempting to redirect their fire without ample preparation time. On-call fire support should be extremely inaccurate and should require so much time as to be useless.

### **Air-to-Air Combat**

The same problems with creativity and initiative are likely to *hinder Arab air forces in air-to-air combat*. Success in dogfighting requires that pilots have tremendous independence and confidence in their decision-making. A pilot must be willing and able to constantly and instantaneously reexamine his situation and decide on the best course of action. Similar to the problems to be expected of maneuver on the ground, air-to-air combat requires the imagination to constantly conceive of possible alternative spatial arrangements, and the willingness to act quickly and decisively to create favorable situations. In addition, in air-to-air combat, it is crucial for the pilot to fully understand the capabilities of his aircraft and weaponry so that he can take full advantage of their capabilities and avoid their weaknesses. Clearly, men who have had little exposure to machinery and do not have a grasp of the basic mechanics involved in air warfare are unlikely to get full advantage of their planes and weapons.

Thus, Arab fighter pilots should fare poorly in dogfights. They should be slow and clumsy in their maneuvering. They are likely to use simplistic and mostly unsophisticated tactics. They are unlikely to develop their own maneuvers and should have tremendous difficulty responding to new technology or maneuvers developed by an adversary. Where available, they are likely to be heavily reliant on Ground-Controlled Intercept (GCI) guidance. They may have difficulty deciding when to employ missiles or guns, or when to use which kind of missile, and they are likely to make such decisions dogmatically, relying on the dictates of their doctrine, rather than their immediate circumstances.

### **Air-to-Ground Attacks**

Many of these same considerations hold true for air-to-ground operations as well. It is an extreme rarity when a pilot can count on having ample intelligence on a target, a detailed mission plan, precision-guided munitions that make it unnecessary for him to do anything but launch the weapon, and a flight so uneventful that he needs to do nothing except execute the plan. Almost invariably, intelligence on a target is incomplete or inaccurate, the mission order is more a general course of action than a precise flight plan, and the weapons being employed demand that the pilot maneuver the aircraft into an advantageous launch position--and frequently even select a target or aim-point upon arrival at the target area.

In any of these instances, the success of the mission will depend on the ability of the pilot to understand the nature of the mission, the capabilities of his aircraft and weapons, what targets would be most lucrative, what targets would be most vulnerable to his weaponry, and the best way to bring those weapons to bear against the target. In addition, an airstrike, like a dogfight, requires the pilot to maneuver his aircraft to accommodate these competing considerations. Moreover, because it is so rare that an attack mission can be planned out in minute detail beforehand and then executed without a hitch, air-to-ground missions require a high degree of creativity and aggressiveness on the part of the pilot to adjust for problems and still accomplish the mission. Once again, personnel with little familiarity with machinery, a tendency to refrain from innovating or taking initiative, and a tendency to concentrate on details to the neglect of the larger issue would likely have *difficulty conducting successful airstrikes*. Arab airstrikes ought to be simplistic, rigidly executed with little adaptation to the actual situation or compensation for deviations from the plan, and ultimately should be highly inaccurate.

Moreover, there is unlikely to be any real difference between airstrikes against large, fixed targets such as buildings and airbases, and those against mobile, or even

moving targets, such as combat units. There are so many variables involved in an airstrike that it is impossible to plan against all of them, and ultimately, the individual pilot must make any number of subtle adjustments to compensate for slight differences between the mission as it was planned, briefed and rehearsed, and reality. For example, even if an air-to-ground mission is to employ pre-designated aim and release points to help the pilot put the ordnance on the target, there is still a tremendous amount of skilled required by the pilot to properly align his aircraft and to adjust for slight discrepancies. Because even minor mistakes can result in wide misses, it is never the case that air operations can be planned and rehearsed to such an extent that pilot-judgment is not a crucial element of success.<sup>168</sup>

### **Ad Hoc vs. Set-Piece Operations**

The emphasis on conformity and traditional patterns of behavior, the corresponding stigma attached to innovation and creativity, the notion that change should come from higher authority, and the frequent manipulation and distortion of information all suggest that Arab forces should have great *difficulty formulating and executing ad hoc operations* and should be much more comfortable implementing preset plans formulated by higher levels of command. Moreover, Arab armies should have difficulty in executing ad hoc operations and not necessarily in planning them. Ultimately, the planning of ad hoc operations falls on senior commanders, and it is usually not a terribly taxing burden on them simply because it is the nature of an ad hoc operation that circumstances are changing in such a way that the commanding officer can only issue general orders to his subordinates regarding the changes to be made. Hence it is really up to the junior officers, the local commanders, to turn these general directions into specific actions. So we should expect to see Arab ad hoc operations fail not necessarily because the changes ordered by the senior officers were faulty, but because the tactical units proved incapable of implementing those changes.

By contrast, the flip side of most of these traits--the determination to conform to accepted norms and execute reasonable and well-defined orders from a valid source of authority, suggests that *Arab militaries ought to do better when executing set-piece operations*.<sup>169</sup> While information flow problems are always a problem for any military operation, they are far less damaging for set-piece operations, when the high command should have the opportunity to rely on its intelligence collection and analysis assets to gather the needed information prior to the start of the operation, rather than having to rely on combat reports from front-line commanders in the midst of the battle.

Therefore, Arab military units should experience great difficulty executing operations that are formulated on the spot and must be implemented "on the fly," without time for detailed planning and rehearsals. Conversely, Arab militaries given the time to

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<sup>168</sup> One factor that should make a difference, however, is the extent to which Arab air forces are able to employ highly-advanced "smart" weapons. Smart weapons should make a considerable difference in the accuracy of Arab airstrikes because they eliminate much of the need for pilot judgment in determining where the ordnance lands. If all that is required to destroy a tank or building is to keep a laser designator pointed at it and every other consideration is compensated for by the laser-following capability of the bomb, there is little need for the pilot to adapt and improvise to counter for minor discrepancies between the planned mission and the actual mission. Consequently, Arab air forces employing smart weapons should do considerably better than those forced to use conventional "dumb" bombs.

<sup>169</sup> On this prediction, it is worth noting that the very qualities that allow a military to perform well in unstructured maneuver warfare--a willingness of senior commanders to delegate authority to junior commanders at the point of attack, and the willingness of those junior officers to act creatively and aggressively with only general guidance from higher authority--are also the greatest obstacles to the proper execution of set-piece operations. In a well-rehearsed, minutely planned set-piece operation, junior officers who begin improvising on their own authority are likely to create tremendous problems for themselves and everyone else around them.

meticulously plan and practice even very complex operations ought to perform them quite well--as long as things proceed according to plan. Moreover, Arab operations ought to go reasonably well when sticking to a detailed, rehearsed plan but then should suddenly fall apart if unforeseen events force them to deviate from the plan.

### **Combined Arms Operations**

Problems resulting from atomization of knowledge, compartmentalization of knowledge, and consequent difficulties with interdisciplinary subjects are likely to result in *poor combined arms operations*. Combined arms operations require the integration of knowledge from widely disparate fields (from infantry operations, armor operations, air operations, etc.) and the ability to intellectually integrate the interactions of these different forces. In effect, combined arms operations are the military's version of an interdisciplinary subject. Understanding combined arms requires not only understanding the capabilities and missions of each combat arm, but more importantly, understanding their interaction.

Arab armies should have great difficulty properly integrating the various combat arms into true combined arms teams. At the most basic level, Arab combat arms should concentrate on their own missions and should fail to provide support to one another. Skilled adversaries are likely to be able to defeat each element of an Arab combined arms team in detail because the various elements will not coordinate their efforts. Arab officers may show a recognition of the need for combined arms coordination, but not the ability or understanding as to exactly how to make this cooperation happen. Although laborious efforts by command staffs may be able to produce relatively good combined arms integration as part of set-piece operations, if the plan breaks down because of unforeseen circumstances or the operation otherwise falls apart, combined arms cooperation should come apart as well.

### **Unit and Service Coordination**

In the same manner that atomization of knowledge, compartmentalization of knowledge, and consequent difficulties with interdisciplinary subjects should be expected to hamper combined arms operations, so too should they prevent proper coordination among maneuver units and even between entire services. Because Arab commanders probably will fail to grasp the broader outline of the larger operation in which they are playing a role, and because they will lack information regarding the roles to be played by their peers and by their superiors, it is likely that they will concentrate on achieving their specific objectives and pay little attention to anything else. Consequently, *Arab militaries should suffer from poor cooperation among units and services*. Coordination between armed services--such as the air force and the army--should break down primarily because commanders do not understand how their actions fit into a larger scheme, and that their actions must mesh with those of their neighbors so as to achieve the general goals of the operation, even to the extent of sacrificing specific tactical objectives. Arab formations should concentrate to the detriment of everything else on their specific mission and should not sacrifice this to aid another unit in the accomplishment of its mission, or to better accomplish the larger goal of its superior formation. Arab military operations should be disjointed and fragmented, and Arab military forces should consistently fail to provide support to one another.

### **Unit Cohesion**

The powerful forces related to group loyalty that pervade Arab society are likely to have a similarly powerful impact on unit cohesion. The consensus of the Middle East experts appears to be that Arab interpersonal bonds tend more toward the extremes (at least when implicitly compared with Westerners): Arabs tend to feel greater loyalty and obligation to friends, relatives and others with whom they establish a clear "in-group" tie, but feel considerably less attachment or obligation to those with whom they are unable to

make such a link. Consequently, we should expect to find that *unit cohesion in Arab militaries should be uneven*.

Arabs clearly feel extremely strong bonds and obligations to those they regard as being connected to them in some way. While kinship ties are the most obvious example, as many Middle East scholars have noted, loyalty normally associated with kinship can be extended to friends, coworkers, and neighbors. It would be reasonable to expect that these ties could well be extended to other members of a soldier's unit. It seems relatively strait-forward to imagine that in many cases, wingmen, squadron-mates, platoon-buddies, and fellow crew-members could become extremely close. Indeed, there is no reason to believe that an entire unit could not take on the characteristics of an Arab primary group (effectively an extended family) in the manner that many Middle East experts have noted that offices, institutions, clubs, and other groups do. In these instances, we should expect Arab units to continue to fight as a cohesive unit under extreme pressures, likely even in situations where military formations from most other cultures would disintegrate. Nevertheless, while there clearly is no reason that such ties should not develop, there is also no reason that they necessarily must. Soldiers may not extend interpersonal ties to the other members of their units, and entire units may fail to coalesce in the manner of Arab primary groups. In such cases, we should expect that the unit would likely disintegrate under even very slight enemy pressure.

Ideally, it would be useful to try to use the traits of the dominant Arab culture described above to try to predict *a priori* which units are likely to remain intact and which are likely to disintegrate in combat. Unfortunately, this is an extremely difficult task. One obvious clue would be whether a unit is composed primarily of members of the same family, tribe, village, or city neighborhood. In such units where the soldiers and officers would likely already have strong attachments to one another--the bonds of loyalty having been established well before entrance into the military--we should expect superb unit cohesion. Conversely, units comprised of members of different families, tribes, or ethnic groups with a long history of animosity should have extremely poor cohesion as it would be unlikely for close bonds to develop across such schisms. Another factor that deduction suggests would be an important criteria in determining whether an Arab military unit develops the loyalties of an Arab primary group is the behavior of the unit's commander. If the commander plays the role of the father-figure properly--taking a strong hand, shouldering responsibility for the unit as a whole and his troops as individuals, but also looking out for their best interests--it seems much more likely that the unit as a whole will take the form of a primary group, with the soldiers serving as obedient, loyal "sons." Finally, it would also seem reasonable that units that have been together the longest, and perhaps been through other battles or other difficult circumstances, would have had the greatest opportunities for soldiers and officers to settle into their various roles and develop ties of loyalty and obligation.

There are two problems with all of these predictions. First it is very difficult to come by the information necessary to assess these predictions. Such analysis would require detailed unit histories of very small units--platoons, companies, battalions, and air force squadrons, for the most part. No military keeps such records in a systematic fashion and the scraps that may gleaned from various historical narratives are likely to provide only a partial sample of the entire force. The second problem is that many of these factors suggested as being most likely to produce strong unit cohesion are very similar to generic factors that experts have identified as producing good unit cohesion in all militaries. Long-service together, service in hardship, firm but responsible leadership, and pre-existing affiliations have been found to greatly improve the cohesion of units in virtually every other military.<sup>170</sup> Quite obviously, there are differences both in how these

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<sup>170</sup> For a good treatment of the influences on unit cohesion, probably the best source remains W. D. Henderson, *Cohesion: The Human Element in Combat Leadership and Societal Influences in the Armies of the USSR, the US, North Vietnam, and Israel*, (Washington, DC: National Defense University, 1979).

factors work in the Arab world, and also in the dynamics they produce--specifically, they ought to produce much better cohesion in Arab militaries than in non-Arab militaries because of the greater strength of such ties generally. However, these ultimately are very subtle differences, and are probably too subtle to be able to be accurately detected and distinguished from the slightly different factors associated with generic unit cohesion to be able to establish whether variations in unit cohesion are a product of specific cultural values or universal tendencies.

### **Personal Bravery**

In contrast to the difficulties involved in assessing unit cohesion, another straightforward prediction of the theory is that the traits of the dominant culture that encourage Arab men to be *courageous in adverse situations, and stoically endure hardship* are likely to produce the same sorts of behavior on the battlefield. We should expect Arab soldiers to willingly suffer through deprivation, inclement weather and other conditions, as well as heavy combat. In addition, we should expect Arab soldiers to fight ferociously--although this may or may not have any impact on the outcome of the battle.

### **Operational Readiness**

The aversion to manual labor and technical work should be expected to greatly *hinder maintenance and repair work* among Arab forces. Few Arabs are likely to be interested in serving as mechanics and most Arab military personnel are unlikely to show an interest in or aptitude for the maintenance of military machinery. Consequently, Arab armies and air forces are likely to suffer shortages of mechanics, especially in the larger number of smaller formations such as brigades, battalions, and air squadrons. In addition, it is likely that Arab armed forces will suffer low operational readiness rates and have great difficulty recovering and repairing damaged equipment.

### **Employment of Machinery and Technology**

In addition, to the extent that the aversion to manual labor and technical disciplines results in a general lack of familiarity with the functioning of machinery, it would be reasonable to expect that Arabs would find it *difficult to master military equipment and weaponry*. Arab militaries should rarely be able to get the full potential out of their weaponry. Arab personnel should mostly operate sophisticated machinery in a terribly unsophisticated--perhaps even debilitating--fashion. Overall they should fail to achieve the same results with that equipment as others have been able to do. Moreover, this unfamiliarity with machinery is likely to manifest itself in the form of *unusual difficulties in fully assimilating new weaponry into the force structure of Arab militaries*.

Thus, Arab armed forces should take very long periods of time to master new equipment. In many cases, they may never fully master some systems. For example, Arab marksmanship with more sophisticated weapons such as tanks and jet aircraft ought to be poor. Delivering ordnance on target is the ultimate goal of most military equipment, and an inability to properly employ that equipment ought to manifest itself on the "bottom-line" of warfare: destroying objects. In addition, Arab militaries ought to experience problems in integrating new weaponry into their existing force structures. They should use the new weaponry to do certain things but fail to take advantage of the full range of capabilities. They are likely to fail to adapt the missions and operations of other elements to work with the new equipment, and are unlikely to recognize all of the potential opportunities created by the new weaponry.

### **Logistics**

The aversion to technical/manual labor also should contribute to *problems with logistics*. Lt. General Gus Pagonis, who ought to know, sums up the crux of the problem

by noting that "Logistics involves getting your hands dirty."<sup>171</sup> Logistics means moving forces, moving supplies to the forces, and making sure that there are sufficient supplies available for operations. Much of what is required to make logistics work falls into the realm of manual labor or close to it. Consequently, the disdain of Arab culture for such work would suggest Arabs would find logistics an unpleasant and undesirable mission and would leave it to those least worthy of combat positions. Particularly among officers, it is likely that only those unfit for the highly coveted combat commands or other prestigious posts would end up in the logistical services.

As a result Arab armies should be expected to experience problems throughout the logistical system. Spare parts and combat consumables should be stockpiled in quantities above and/or below actual needs. Inventories should be poorly maintained and supplies transferred in a less than systematic fashion. In general, there should be an inattention to supply matters which should translate into shortages (sometimes coupled with oversupplies in different categories of provisions) among combat units.

### **Combat Engineering**

The aversion to manual labor and technical work would also suggest that Arab armed forces are likely to have *poor and limited engineering capabilities*. It would be reasonable to expect that there would be few Arabs interested in the army's corps of engineers, and that the skills of those who did find themselves in engineer units would be low. Since Arab culture apparently encourages students not to pursue scientific interests, and hampers the teaching of basic technical skills, at least at primary and secondary levels of education, it is reasonable to assume that Arab armies would find it difficult to field sizable numbers of competent engineers. Consequently, Arab armies should have difficulty crossing water barriers and other terrain obstacles. They should have difficulty breaching well-fortified lines, and building defensive positions of their own. Those fortifications they do build should be unimpressive and poorly maintained.

### **Technical Support of the Military**

The general neglect of technical work and the corresponding neglect of the sciences, should hinder Arab militaries from conducting systems analysis, operational research, research and development, and support for their military forces in science and technology. Arab militaries are likely to take a non-systematic approach in analyzing their capabilities and needs. Defense industries are likely to be unproductive, and unlikely to emphasize the actual needs of the military forces. Systems analysis and operational research should be non-existent. Research and development should be superficial and produce little of value that can be utilized by the military. In general, *scientific and technical support to the military should be inadequate and misguided*.

### **Intelligence and Operational Security**

The manipulation of information, as well as the denigration of low-level initiative and innovation are likely to contribute to *poor or haphazard intelligence collection, analysis and dissemination*. Intelligence officers may tell their commanders what they believe their commander wants to hear for fear that to do otherwise would humiliate him or them. Similarly, intelligence personnel may fear that reporting bad news will humiliate other personnel, perhaps friends or even family members. Other intelligence officers may purposely provide incomplete or inaccurate information as a means of maintaining some degree of control over operations. Dissemination of intelligence is likely to be strictly circumscribed either because commanding officers want to use control over information as a means of controlling their subordinates, or because officers are simply not accustomed to disseminating information on a regular basis. Finally, good

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<sup>171</sup> Lt. Gen. Gus Pagonis with Jeffrey L. Cruikshank, *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War*, (Cambridge: Harvard Business School Press, 1992), p. 101.



tactical intelligence requires constant patrolling and other reconnaissance activity. Such constant operations require a high degree of initiative and creativity from tactical commanders to recognize the need for such information and to take it upon themselves to get this information by sending out patrols. Such initiative is not likely to be forthcoming to the extent that information, like authority, is expected to come from the top--rather than the bottom--of a hierarchy.

Many of the same features that are likely to contribute to poor intelligence are likely to contribute to *superb operational security*. Secrecy and compartmentalization of knowledge should make it difficult for foreign intelligence operations to discover the activities of Arab militaries before they are put into effect. Moreover, to the extent that all decision-making is centralized at the top of the hierarchy, foreign intelligence will have to find some way of penetrating the highest levels of the military command--in some cases, they may have to find some way of discerning what the top military commander himself is thinking. Clearly, the more decentralized a command structure the more people with access to information regarding military operations, the easier for an enemy to discover the plan, while the more centralized the command structure, the more difficult it is to uncover an adversary's plans and operations.

### **Additional Predictions of the Theory: The Big Picture**

Standing back from the weeds of military operations, there are four additional hypotheses generated from the theory that pertain to broader patterns of Arab military performance. First, since most of the traits identified as important elements of the dominant Arab culture to focus on subordinates in a hierarchy, this suggests that many of the patterns of military effectiveness predicted by the theory should be most problematic at lower levels of the chain of command. Second, because the dominant Arab culture is, by definition, common to the entire region, it should be felt in all Arab militaries, albeit with some variations derived primarily from sub-cultural differences. Third, as a general prediction, Arabs should experience tremendous difficulty with mobile, mechanized operations, because many of the cultural traits identified above create patterns of behavior deleterious to this form of warfare. Finally, Arabs should do very well in static defensive operations because many of the traits identified above contribute to this type of operation, while those Arab traits that are generally deleterious to all military operations have the least impact on static defensive operations.

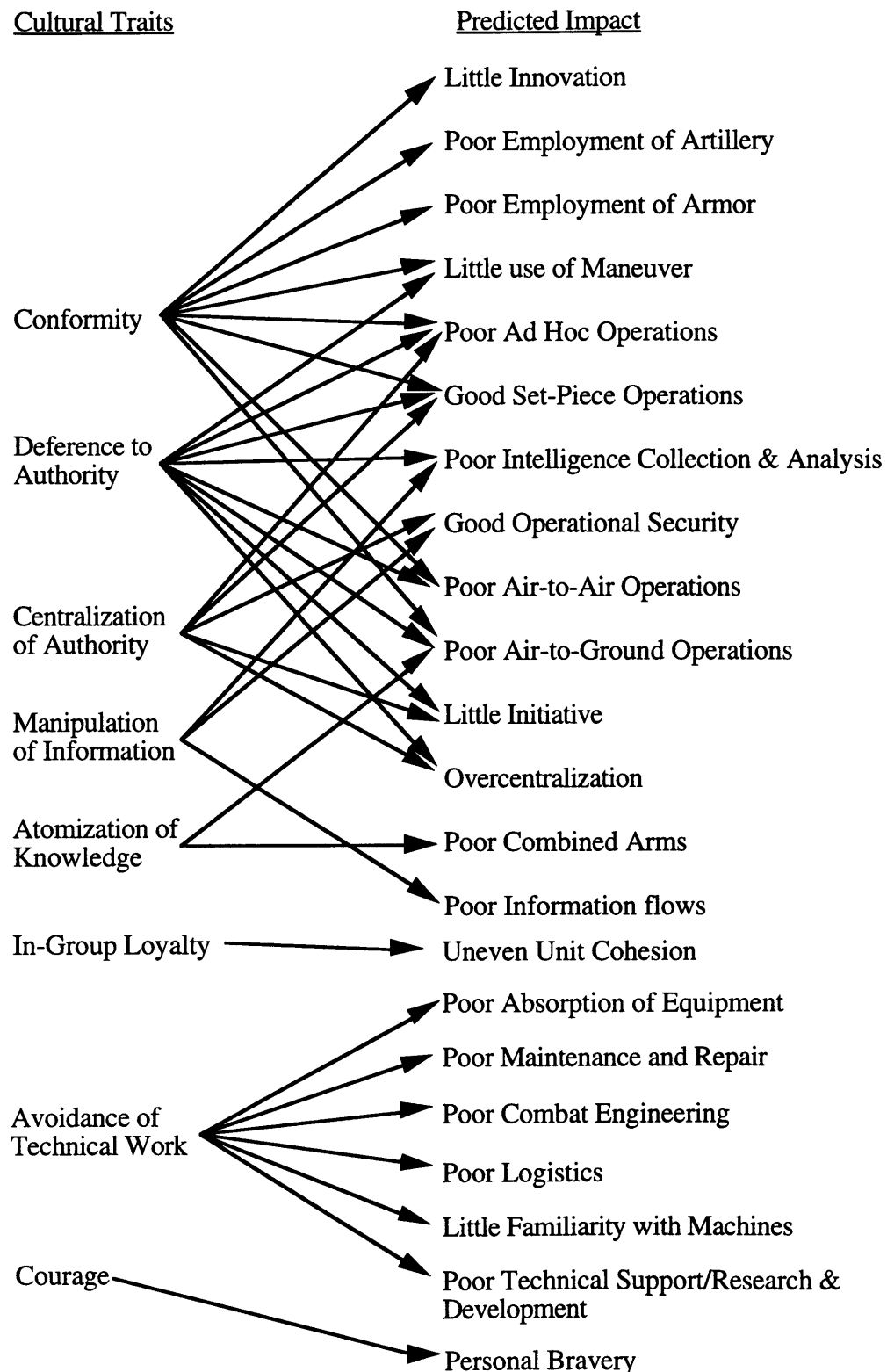
### **Tactical Leadership**

Many of the predictions regarding Arab military effectiveness described above should be most pronounced among the junior officers of Arab militaries.<sup>172</sup> There are three intertwined reasons why this is so. First, most of the hypotheses generated from the theory pertain to decision-making, which is generally the role of officers and only rarely that of enlisted personnel. Formulating and executing ad hoc operations, directing artillery fire, integrating differing combat arms into combined arms operations, etc., are all the responsibility of the officer corps. Only a small number of the hypotheses relate to the actions of enlisted personnel, such as the lack of familiarity with machinery, the likelihood of poor maintenance, and difficulties handling armor, and even in these cases, the problems are likely to manifest themselves equally among the officer corps. Overall, these problems are likely to be more debilitating among officers than enlisted personnel.

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<sup>172</sup> Of course there are other predictions that apply as much if not more so to the enlisted ranks of Arab armed forces. For example, the hypotheses regarding personal bravery, unit cohesion and assimilation of equipment pertain equally to enlisted personnel and junior officers. Consequently, this is a tendency, not an iron-clad law.

**Diagram 2a. Hypotheses Derived from Selected Patterns of Behavior of the Dominant Arab Culture**



Most of these hypotheses pertain primarily to Arab officers, but there remains the question of whether the effects of culture are likely to be felt more at higher or lower levels of command. The primary factor bearing on this issue is the tendency of culture to manifest itself primarily in aggregated behavior. The larger a group of people, the more likely its actions will conform to culturally regular patterns of behavior. Likewise, the larger the number of decisions made by a group of people, the more likely these decisions will conform to culturally prescribed patterns of thought. Conversely, the smaller the group or the fewer the number of decisions being made, the less likely that these actions will conform to culturally regular behavior. Because the lower ranks of the officer corps of any military service will greatly outnumber the higher ranks, and because the lower ranking officers will, as an aggregate, make vastly more decisions than the higher ranking officers, the actions of junior officers taken as a whole should more closely conform to culturally regular patterns of behavior than those of the senior officers.<sup>173</sup> Thus, Arab armies should increasingly show the effects of culture at lower levels of command. The aggregated actions of platoon, company, and battalion commanders are probably most likely to show the impact of culturally regular patterns of behavior, brigade and division commanders may not show its effects quite so strongly, while corps, army, and national level commanders, are least likely (although they may not necessarily be totally immune) to manifest cultural patterns in their actions.

Beyond the statistical argument, there is another reason that we should expect culturally regular patterns of behavior to be most prevalent at lower, rather than higher, levels of command. By definition, leaders are not "average" individuals. Even in the most non-meritocratic organizations, leaders are selected because they stand out from the rest in some way, shape, or form. In many cases, leaders will have consciously sought selection for positions of authority, and most will have been affected by their experience as leaders. Consequently, leaders differ from the norm in a variety of important ways. Moreover, it is invariably the case that senior leaders in a hierarchy will differ more from the norm than will most junior leaders. After all, the senior leaders must have possessed some quality in sufficient quantity to make them exceptional. Regardless of whether this exceptional quality is loyalty or competence, family connections or good looks, the point is that there is something about senior leaders that makes them very different from the mass of the organization. Although junior leaders are likely to be somewhat different from the norm, taken in the aggregate, they almost certainly will be far closer to it than their superiors.<sup>174</sup>

Finally, as noted above, many of the patterns of behavior I have singled out for consideration derive from characteristic relationships between the leaders and the led in traditional Arab hierarchies. Thus for example, subordinates in such hierarchies are not

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<sup>173</sup> Perhaps the best way to understand why the behavior and actions of junior officers should more closely conform to culturally regular behavior than that of senior officers is with a simple example. Assume an army composed of three corps, each composed of three divisions, each composed of three brigades, each composed of three battalions, each composed of three companies, each composed of three platoons. Only considering the maneuver units, this army will be comprised of three corps commanders, nine division commanders, 27 brigade commanders, 81 battalion commanders, 243 company commanders, and 729 platoon commanders. (In actuality, because the number of non-maneuver units such as signals, anti-tank, artillery, etc., attached to formations tend overwhelmingly to be organized into battalion-sized units or smaller, the number of lower-ranking commanders is likely to be much greater in proportion to the number of higher-ranking commanders than this simple example portrays.) No matter how badly the three corps commanders micromanage the battle, the number of decisions they make will inevitably be smaller by orders of magnitude than the number of decisions made by the 243 company commanders. Although it is true that the decisions made by the company commanders will probably be less important than those made by the corps commanders, it is also true that taken as an aggregate, their actions should more closely conform to culturally regular patterns of behavior than those of the far smaller number of corps commanders.

<sup>174</sup> I am indebted to Daryl Press for bringing this argument to my attention.

only *not* expected to exhibit behavior such as initiative and creativity, they are generally frowned on for doing so. Consequently, this too suggests that many of the characteristic behavioral patterns predicted by the theory of Arab culture should be most pronounced at lower levels of command, with lesser impact at higher levels of command.

### **Congruence Across the Entire Arab World**

Another hypothesis of the theory following from the nature of culture is that the various patterns of combat performance predicted by the theory should, for the most part, be found among all Arab armies. Since the dominant Arab culture is common to all of the Arab countries I considered, all of their militaries should manifest the expected patterns to a greater or lesser extent. This is not to suggest that there will not be exceptions to the rule: some national sub-cultures may produce different traits, or different variations on common traits that will produce different patterns of behavior on the battlefield. In addition, the unique experiences of different nations may heighten or dampen culturally inspired behavior in some areas. However, it should be true that most of the armed forces of these countries should manifest the behavior predicted by most of the hypotheses of the theory. Indeed, the greater the commonality of patterns of military effectiveness across the region, the stronger the case supporting the theory that Arab military ineffectiveness derives from patterns of behavior characteristic of Arab culture.

### **Mobile Armored Warfare**

Most of the predictions regarding Arab military effectiveness discussed in the previous section discussed specific elements of Arab behavior in combat. However, if we stand back a bit from such narrow considerations, it is possible to perceive a forest encompassing the trees. One prediction discernible from a broader perspective is that Arab forces should experience tremendous difficulties conducting fluid, mobile operations as has become common in armored warfare since the Second World War. Many of the patterns of battlefield effectiveness predicted by the theory should hinder the ability of Arab armies to perform many of the critical components necessary for successful mobile operations.

To fight effectively on a fluid battlefield, an army must show good use of tactical maneuver, an ability to quickly and easily shift forces and artillery fire, an ability to improvise and to immediately exploit fleeting opportunities, a willingness to delegate command authority to the lowest levels, and a thorough grasp of combined arms operations at all levels. Tanks and other armored fighting vehicles remain the centerpiece of a modern army and the ability to employ them properly and maintain them in the field are critical to sustained operations. In addition, the rapid pace of modern operations and the transient nature of engagements demand a smooth, rapid flow of information and the delegation of authority to the lowest levels of command to ensure those who are "at the point of the spear" are responsible for decision-making and have all the information they need to make the right decisions. Finally, junior officers, the mid-level managers of modern war, are crucial to maneuver warfare, because in fluid combat, decisions must be made by the local commanders "on the spot." Thus poorly-qualified junior officers will make maneuver warfare impossible. Because the theory predicts that Arab armies should have trouble in all of these various categories of military performance, and because these categories are critical components of effective mobile operations, we should expect to find that, in general, Arab armies will experience considerable difficulties conducting mobile, maneuver warfare.

### **Static Defensive Operations**

Just as a number of traits combine to predict general difficulties in maneuver war, so do a number of the traits of the dominant Arab culture that predict positive patterns of military effectiveness suggest that Arab armies should enjoy considerable success in static, defensive operations. Moreover, in static defensive operations, many of the

negative patterns of military effectiveness that should arise from traits of the dominant Arab culture either are irrelevant or else are less pernicious. As a result, the Arab culture theory predicts that Arab armies are likely to enjoy considerable success in static defensive operations in the same way that they are predicted to suffer consistent failures in mobile armored combat.

Traits of personal bravery, a willingness to execute the orders of a superior without hesitation or alteration, and the tendency to centralize authority are likely to aid Arab militaries in conducting static, defensive operations. Centralization of authority is an important aspect of a static defense because usually it is the concentration of forces against the main axis of attack by the senior (defending) commander that proves decisive in stopping the attack. Only the overall commander is likely to have the information regarding his own and enemy forces to know where the critical fight is taking place and the authority to be able to concentrate sufficient forces there to defeat the attack. Concentrating authority in the hands of the overall commander means he will have greater ease in shifting units and committing reserves, while delegating authority to aggressive, independent-minded subordinates can result in junior officers shifting forces or committing reserves which are then unavailable to the senior commander where they are truly needed.

Static defensive operations also place less demand on those areas of military effectiveness with which the Arab culture theory suggests Arab armies will have the most difficulty. A static defense requires less initiative and innovation from junior commanders because the static nature of the fighting, the slower pace of operations, and the clearer definition between attacking forces and defending forces should allow the senior commander to keep greater control over the course of the battle without hindering the operations of his forces. While rapid, accurate transmission of information is always important, it is somewhat less so for static defense because there is less movement, defense lines are better defined, there is less intermingling between attacking and defending forces, less information is needed by the defender, and the defender's commander is more likely to be able to dispatch trusted aides to gather the information he does require. Static defenses also alleviate a number of other problems predicted by the Arab culture theory: artillery can be preregistered and fire-missions preplanned, there is less need for units to maneuver, and tanks can be placed in dug-in positions and employed like armored anti-tank weapons. Again, although it would be better to employ maneuver and use armor and artillery flexibly in static defensive operations, successful static defensive operations rely on these skills less than other types of combat operations do.

There is an important joker in this deck, however, and this is unit cohesion. Unit cohesion is a critical component of static defensive operations because the success or failure of a static defense ultimately hinges on whether the defending units stand and fight or run. As noted above, the theory predicts that Arab unit cohesion should prove uneven depending on a number of criteria. Because unit cohesion is an important element of static defense, Arab static defensive operations are likely to fluctuate along with unit cohesion to a certain extent. However, because the traits of personal bravery, conformity and obedience to authority, and centralization of authority should exert an influence on Arab static defensive operations independent of the effects of unit cohesion, we should still find that Arab defensive operations generally fare better than would be predicted by looking at unit cohesion alone.

This last point generates a number of sub-predictions regarding Arab static-defenses that should be testable. First, even when static defenses fail because Arab unit cohesion breaks down, the resulting defeat should not be as bad as the breakdown in unit cohesion alone would suggest. Second, when Arab static defenses succeed because unit cohesion holds, they should enjoy greater success than would be suggested merely by the strength of the unit cohesion. In addition, it should not be the case that Arab static defenses should fail because junior commanders have taken actions that have prevented

their senior commanders from ordering alternative courses of action. While this last point is not generated by considerations of unit cohesion, it is an important sub-prediction of the theory with regard to static defensive operations; because the theory predicts that subordinates are unlikely to take initiative, then while Arab static defenses may fail, they should not fail because a junior officer took action (i.e. showed initiative) that caused the failure by precluding actions by the senior leadership. Moreover, when Arab defenses fail, they are likely to fail catastrophically because the unwillingness of lower echelons to take the initiative and improvise responses and adapt to an enemy penetration in a timely manner probably will allow the attacker to exploit a penetration and turn it into a major breakthrough.

### **A Final Prediction: The Transmission Mechanism**

There is one last prediction of the theory, derived not from the traits of culturally regular behavior gleaned from the sociological work on the Middle East, but from my definition of culture itself. This prediction is that the method by which culture influences military effectiveness should be found in the process of formal and informal education in the Arab world. Culture, as I define it, is *acquired* behavior. It is a set of patterned behaviors which all members of a community learn over time. This learning takes place both informally--within the family, among friends, and at the work place--as well as formally in school, where a culture's values are imparted along with knowledge. Westerners, Americans in particular, have difficulty recognizing this, as it is part of our culture to believe that the way of doing things we have developed is somehow "best" in an objective, universalistic perspective. In fact, it is best for us because it accommodates our values and ideals, in short, our culture. Despite the rhetoric regarding a "Western canon" versus "multiculturalism," our schools teach Western values on a constant basis. Everything about our schools is suffused with Western culture: the method of teaching, the thought processes imparted to children, the expectations of the behavior of students, the basic consensus as to what constitutes academic "success," are all products of our particular culture. Even the most multi-cultural programs use Western methods to teach non-Western substance.

This being the case, it would be surprising if the same were not true for the Arab world. Consequently, my theory predicts that Arab education, in all its various forms, should teach the values I have identified as being part of the dominant Arab culture. That is, education in the Arab world, both formal and informal, should constantly seek to mold the values of the individual along the lines of the culturally-regular patterns of behavior I have identified. Arab families and schools should teach conformity, deference to authority, loyalty to the group, manipulation of information, atomization of knowledge, etc. The teaching of these values is not to be found in the formal curriculum (it is unlikely we will find a class in any Arab *Madrassah* called "Conformism 101"), but in the teaching method itself. In how students are taught to think, to learn, and to behave.

In addition, it does not seem unreasonable to expect the same from Arab military training methods. Military training is, in effect, another formal educational process. Not only do recruits learn how to fire a gun or drive a tank, they also learn how to think like a soldier. It has frequently been observed that military training can completely alter the behavior and thought-processes of the individual--the jump from civilian to military. Indeed, some have noted that in certain instances a military comes to have a subtly different culture from that of the society itself. That is, the military espouses different values and ideals than the larger society. India is often cited as an example of this phenomenon, where the army retains the heavy stamp of British culture because of its long domination by the British. The culture of the Indian Army does, of course, possess significant elements of the larger Indian culture, but it is the British element that

dominates, and gives Indian military officers and soldiers a subtly different set of values and a different perspective on the world than other Indians.<sup>175</sup> The point here is that because military training is so rigorous and lengthy, it can effectively "train" the culture "out" of a soldier. This being the case, the Arab culture theory would predict that Arab militaries could only be expected to manifest culturally-regular patterns of behavior in combat to the extent that their training system does not differ radically from the educational methods of the larger culture. To the extent that Arab military training methods conform to the educational practices of the larger Arab society, we should expect to find these various traits reinforced by the military training, and thus even more pronounced on the battlefield.

By contrast, to the extent that Arab military training methods do not conform to the educational practices of the larger Arab society, we should expect to find that Arab soldiers and officers do not perform as predicted by the theory. In other words, if the military culture is different from the culture of the society, we should expect the military culture to also influence the behavior of the armed forces personnel. To what extent this is true is likely to depend primarily on how long the personnel have been trained. If new recruits are given only perfunctory training and serve for only a few years, it seems highly unlikely that their values and behavioral patterns can be reshaped along the lines of the military culture. Indeed, in such situations it seems highly likely that the military culture would quickly come to resemble the dominant culture simply because the period of training is so short and the turnover time so rapid that we should expect few recruits to fully absorb and internalize the military's culture. If, on the other hand, military personnel serve for long periods of time in which they can be constantly trained to act and think as the military wants--rather than as the larger society wants--then the military culture may differ from the culture of the larger society. The longer the periods of training and service the easier it is to instill military personnel with a new set of values and behavioral patterns.

### **Summary: The Broad Predictions of the Theory**

If the Arab culture theory is correct, Arab militaries ought to perform poorly throughout the entire course of the postwar period. They ought to perform poorly in those areas of military effectiveness I have identified as likely to have been influenced by culturally-regular patterns of behavior for the dominant Arab culture. They also ought to perform well in those areas of strength predicted by the behavioral patterns associated with the dominant Arab culture. In those instances where they do well in battle, it should be because the Arabs have found some way to mask or avoid these areas of weakness and been able to play to their areas of strength. Finally, the most important factor contributing to their losses--or to the narrowness of their victories--should be chronic problems in those areas of military effectiveness predicted to be weakest by the theory: poor tactical leadership, poor information flows, inadequate technical skills, etc.

The reason that these patterns ought to remain the same from war to war is that Arab culture, as I define it, was effectively a constant throughout this period. Although as I note above, Arab culture did change during the 46 years from 1945 to 1991, this change was very slow and often imperceptible. Moreover, for purposes of my study, this change was essentially insignificant: all of the various behavioral patterns I identified as likely to influence military performance were present and important both at the beginning and the end of the period. This being the case, we should expect them to influence combat effectiveness in the same manner throughout the postwar period. Thus, for

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<sup>175</sup> Stephen P. Rosen, *Societies and Military Power: The Indian Army in Comparative Perspective*, (Ithaca, NY: Cornell University Press, 1996).

purposes of this study I treat culture, in effect, as a constant: it has the same values at the beginning of the period as at the end.

Consequently, Arab militaries in combat should manifest essentially the same patterns of behavior in all of the Middle East conflicts since World War II. Regardless of the presence of other factors, or of efforts by Arab militaries to reform themselves, these patterns of behavior ought to remain constant. Whether politicization rises or falls, or Soviet influence on an Arab military grows or diminishes, or the society becomes richer and better educated or poorer and worse educated should not matter: the patterns of military effectiveness ought to remain the same. The only time there ought to be a significant change in military effectiveness should be when an Arab military is able to create a new military culture, one very different from the larger society's culture, and a long-term service army giving them the time needed to train recruits to act and think according to the military culture and not the culture of the larger society in which they were raised and educated.



### Chapter 3

## A Theory of the Influence of Politicization of Arab Militaries on Arab Military Effectiveness

Behavior derived from Arab culture is hardly the only conceivable explanation for the poor performance of Arab armies. Arabs, Israelis, and a multitude of outside observers have been trying to explain this phenomenon ever since the first defeat of the Arab armies at the hands of the Israelis in 1948. These efforts have produced a long list of possible explanations for the consistent failures of the Arabs, some of which are almost as fanciful as "sun-spots" or "flouridation of the water supply," while others seem very persuasive. After reviewing the literature on warfare in the Middle East, I believe that there are, aside from the Arab culture theory, three other plausible explanations for the particular patterns of Arab military ineffectiveness since 1945. First, is the politicization of Arab militaries, which essentially blames poor Arab combat performance on the debilitating impact of domestic politics on Arab militaries. The second explanation is that the poor performance of Arab armies is an artifact of their reliance on Soviet organization, doctrine, and tactics. The third competing theory I consider is that poor military performance is a product of the general economic underdevelopment of the Arab world.

I chose to address these three alternative explanations for three reasons. First, these theories were proposed by a number of respected military analysts who have done work on the Middle East.<sup>1</sup> This alone was enough to prompt me to treat each theory as a reasonable competing explanation for poor Arab military performance. After all, if I am

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<sup>1</sup> On arguments that Arab military problems are the result of low levels of economic development, see Anthony Cordesman, *Jordanian Arms and the Middle East Military Balance*, (Washington: Middle East Institute, 1983); Efraim Karsh, *The Iran-Iraq War: A Military Analysis*, Adelphi Paper 220, (London: IISS, 1987); and Roger Owen, "The Role of the Army in Middle Eastern Politics: A Critique of Existing Analyses," *Review of Middle East Studies*, No. 3, pp. 64-71. On excessive politicization of the military see Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970); Anthony Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, (Lanham, Md: University Free Press, 1987); the essay on Syria in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, Ct: Greenwood Press, 1983); Mark Heller, *State- and Regime-Maintenance and Military Incompetence in Iraq*, A Paper prepared for the conference "Iraq Under the Ba'th", University of Haifa, May 26-29, 1991; David C. Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," in Roman Kolkowicz and Andrej Korbonski eds., *Soldiers, Peasants and Bureaucrats: Civil-Military Relations in Communist and Modernizing Societies*, (London: George Allen and Unwin, 1982); also see the entries under Egypt and Syria in John Keegan, *World Armies*, (London: MacMillan, 1979). On the impact of Soviet-style military systems see S. A. El Edroos, *The Arab Hashemite Army, 1908-1979*, (Amman: The Publishing Committee, 1980); Jon D. Glassman, *Arms for the Arabs*, (Baltimore, MD: Johns Hopkins University Press, 1975); Aharon Levran and Zeev Eytan, *The Middle East Military Balance, 1987-1988*, The Jaffee Center for Strategic Studies, (Boulder: Westview, 1988); R. D. McLaurin, "Military Operations in the Gulf War: The Battle of Khorramshahr," (Aberdeen Proving Grounds, MD: US Army Human Engineering Laboratory, July 1982); Roger Owen, "The Role of the Army in Middle Eastern Politics: A Critique of Existing Analyses," *Review of Middle East Studies*, No. 3, pp. 64-71; and Abraham Wagner and Anthony Cordesman, *The Lessons of Modern War, Volume II: The Iran-Iraq War*, (NY: Westview, 1990).

going to try to measure the importance of culture as an explanation I must also examine the alternative explanations offered by other experts on the subject. Not to have done so would have left too many important questions unanswered. Second, I found all three of these theories deductively persuasive after a cursory glance at the empirical evidence on the Middle East. In each case, the argument being advanced was logically consistent and plausible, at least at a superficial level, when compared to the actual history of Arab militaries.

Finally, I chose to treat only those alternative theories that could reasonably claim to explain Arab military ineffectiveness in a wide range of areas. The Arabs have experienced poor performance in many different situations and while engaged in all sorts of military activities, hence a plausible alternative theory had to be able to explain these varieties by suggesting an influence on many aspects of combat operations. For example, I considered and then rejected the theory that ethnic and religious heterogeneity were the cause of Arab military ineffectiveness. I did so primarily because this theory only predicts poor military performance in a very small number of areas--primarily just unit cohesion and, to a lesser extent, inter-unit cooperation. Because the Arabs have experienced problems in many more categories of military performance than merely these two, I chose not to consider this theory as a plausible alternative explanation. This is not to say that I believe that ethnic and religious heterogeneity does not contribute to Arab military problems: clearly the Iraqi, Jordanian, Syrian, Lebanese, Yemeni, and Saudi militaries have all felt compelled to segregate various ethnic and religious groups within their militaries and this need has somewhat diminished their military effectiveness. However, the direct impact of this problem actually has been very slight, and the primary impact has been felt indirectly, by forcing greater politicization of Arab militaries, a phenomenon that I do treat as a competing explanation.

Of course, in sorting through the alternative theories I did not discard a theory that could not meet all three of these criteria, in fact, I did just the opposite and included any theory that met any of these criteria. After all, even if an explanation did not necessarily strike me as plausible at first glance, if a respected military expert argued that it was the source of the problem, I felt it incumbent upon me to take that charge seriously and to treat the proposed explanation as a viable alternative to culture. Similarly, even if a theory was not supported by other military analysts who had explored this topic, if it seemed deductively plausible, and a cursory review of the empirical evidence seemed to broadly support it, I considered it a reasonable counter-explanation. Indeed, although I found only a few Middle East experts who proposed economic underdevelopment as the explanation for the Arabs' military problems, it struck me as being deductively and empirically plausible and so I chose to include it.<sup>2</sup>

In the same manner that the previous chapter laid out the theory that Arab military ineffectiveness is derived from behavioral traits attributable to the dominant Arab culture, the next three chapters do the same for the three competing explanations of politicization, underdevelopment, and reliance on a Soviet model. For each alternative explanation, I describe the logic of the theory and then lay out the predictions regarding Arab military behavior that can be inferred from the theory. I begin with the alternative theory that it is

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<sup>2</sup> Given these rather undemanding criteria, what is truly noteworthy is that of the enormous range of explanations that have been offered to account for Arab military effectiveness since 1945, I found only four (including culture) that merited consideration as explanations for Arab military problems. This is an artifact of two things. First, many of the explanations that have been offered are subsets or variations on the four major explanations of culture, politicization, underdevelopment, and reliance on a Soviet model. In many instances, authors have pointed to one facet or another of these broader theories as the explanation for all of the problems of Arab armed forces. Second, many of the explanations offered point to factors that do hinder Arab military operations, but closer inspection reveals that they could not possibly explain the breadth and depth of Arab military difficulties since 1945. (The ethnic/religious heterogeneity theory is an example of just such an explanation.)

the politicization of Arab militaries that is responsible for patterns of Arab military ineffectiveness since the Second World War.

### Three Flavors of Politicization

Numerous authors have referred to the phenomenon of "politicization of the military." To a great extent, this literature was spawned by Samuel Huntington's classic work *The Soldier and the State*, which considered a politicized military to be one in which political considerations played an undue influence on the activities of the military. Huntington allowed that this influence might arise from either military intervention in the running of the government or from excessive political involvement in military matters.<sup>3</sup> Although most social scientists after Huntington have used the term "politicization of the military" to refer only to the specific issue of military involvement in government, I use the term in a manner closer to Huntington's original definition. Nevertheless, the extensive focus by social scientists on only one part of Huntington's original concept calls attention to the fact that "politicization" as a term embraces a number of different, but related, phenomenon.

I believe that there are actually three "variants" of the politicization theory. The first, which I refer to as the "commissarist" theory, is that militaries can suffer debilitating problems in combat as a result of heavy-handed efforts of the political leadership to ensure the loyalty of the armed forces to the regime.<sup>4</sup> The second variant on the politicization theme I refer to as the "praetorian" theory because it derives ultimately from the conception of a praetorian military discussed by authors such as David Rapoport and Samuel Huntington.<sup>5</sup> This theory holds that militaries can experience problems

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<sup>3</sup> Samuel Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations*, Vintage Paperback Edition (NY: Vintage Books, 1957), in particular, see pp. 19-25.

<sup>4</sup> I have chosen the term "commissarism" as a short-hand for excessive political control of the military because one of the best known modern instances of such behavior was during the Russian civil war of 1917-1920 when the Bolsheviks attached "political commissars" to their military units to ensure the loyalty of their troops and officers--many of whom had formerly served the Czar. Promotions based on loyalty to the Bolshevik regime, micromanagement of the war, and other efforts to ensure that the Red Army was doing exactly what the Bolshevik leadership wanted were characteristic of this process and are the dominant features of what I consider a "commissarist" military.

<sup>5</sup> The term "praetorianism" was first coined by David Rapoport to refer to the involvement of the military in politics. The Praetorian Guard was the bodyguard of the Roman emperor. Over time, their position as the largest and most powerful military formation in the capital--and the one closest (physically) to the emperor--allowed them to influence the choice of emperor, and several emperors eventually were chosen from among the Praetorian Guard. David Rapoport, "Praetorianism: Government without Consensus," unpublished dissertation, (University of California, Berkeley, 1960); and Samuel P. Huntington, *Political Order in Changing Societies*, (New Haven, CT: Yale University Press, 1968). Huntington's work is often considered the definitive statement of the phenomenon. However, there is an extensive body of literature on praetorianism, some of which predates Huntington's work. For a good, albeit brief, overview of this literature, see David C. Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," in Roman Kolkowicz and Andrej Korbonowski eds., *Soldiers, Peasants and Bureaucrats: Civil-Military Relations in Communist and Modernizing Societies*, (London: George Allen and Unwin, 1982).

The reader should beware that some social scientists have used the term praetorianism to refer to what I call commissarism. Rapoport in particular has discussed the effects of what I call commissarism in the name of praetorianism. Rapoport is concerned with the impact of military interventions in domestic politics on the military. Rapoport argues that the greatest problem arising from praetorianism is that after the first military coup, all governments, military or civilian, have an incentive to ensure the loyalty of the military to prevent the military from launching another coup to unseat them. [See David Rapoport, "Praetorianism: Government without Consensus," Op. cit; David C. Rapoport, "The Political Dimensions of Military Usurpation," *Political Science Quarterly*, vol. 83, 1968, pp. 551-572; and Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," Op. cit.] Consequently, Rapoport sees the phenomenon I call commissarism as being simply a part of praetorianism, a term that he considers synonymous with politicization of the military.

resulting from their intervention in domestic politics. The third variant, which I refer to as the "palace guard" theory, asserts that in some instances, a country's armed forces may have as their only function the protection of the regime from internal threats. The palace guard theory argues that because the security of the regime is the only concern of the armed forces, military effectiveness, in terms of the ability to prosecute conventional military operations against an enemy army, is irrelevant and the armed forces spend little time preparing for combat with external foes. Thus, if the armed forces are ever called on to fight a foreign enemy they experience severe problems because they are being asked to perform a mission they were never intended to perform.

I contend that all three variants are applicable, to a greater or lesser extent, to the militaries of the Middle East. The first variant, what I call commissarism, is a particularly powerful competing explanation that identifies a number of factors that have had real impact on Arab military effectiveness. I also believe that the praetorian theory, while not without relevance to the Middle East, is a less powerful explanation because it makes fewer predictions than does commissarism and its explanatory value for the Middle East decreases considerably after about 1970. Finally, I believe that the palace guard theory has only marginal utility when attempting to explain poor Arab military performance since 1945, because it is difficult to argue that the fundamental assumptions of the theory were applicable to the Middle East beyond the 1950s or at latest, the 1960s. Nevertheless, I believe that because all three variants are manifestations of the broader phenomenon of politicization of the military, and because they are highly intertwined and make many of the same predictions regarding Arab military performance, they should be treated as a single alternative explanation to the Arab culture theory.

In the first section of this chapter, I lay out the commissarist variant of the politicization theory, I note that all of the Arab militaries have suffered from this problem since 1945, and I infer predictions regarding Arab military effectiveness derived from the theory. In the second and third sections of the chapter, I do the same for the praetorian and palace guard theories, although in both cases I also describe the limitations of the theories in attempting to explain Arab military effectiveness since 1945. In the last section of the chapter, I argue that because all three variants are interrelated and there is overlap in the predictions they make regarding Arab military effectiveness, it may be necessary at times to treat them as a single competing variable--politicization of the military--rather than as three separate ones.

### Commissarism

Commissarism refers to heavy-handed efforts on the part of the regime to ensure the loyalty and obedience of the military. The regime seeks to make sure that the military will execute the orders the regime issues and, more importantly, that the military will not turn against the regime and try to oust it. Commissarism generally takes the form of

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Although Rapoport is often credited with coining the phrase "praetorianism," I find his terminology confusing. While I agree with Rapoport that military intervention in government tends to engender government intervention in the military (a point I return to later in this chapter), I believe the two phenomenon are ultimately distinct. Moreover, I believe that there are effects on combat performance from military takeovers of the government other than the proclivity toward governmental micromanagement of the military. Finally, despite Rapoport's efforts, the overwhelming majority of social scientists, including Huntington, have employed the term praetorianism primarily to refer to military intervention in domestic politics.

For all of these reasons, I have chosen to use the term praetorianism to refer to its now common meaning of military intervention in governance, and have coined the term commissarism to refer to the related phenomenon of heavy-handed government control of the military.

debilitating civilian control over the armed forces, including micromanagement of training and combat operations, extensive loyalty-based screening procedures for commissions and promotions, and close attention to command assignments to prevent officers from cultivating the loyalty of their troops. Another typical feature of commissarism is frequent, sudden purges of the officer corps to remove suspected disloyal personnel. Also, Commissarism almost invariably includes efforts to "pack" the military--or often just the officer corps--with family members, political allies, friends, and ethnic or religious groups considered particularly loyal to the despot.<sup>6</sup>

Extensive and often draconian measures to ensure the loyalty and responsiveness of the military to the regime are universal in the Middle East. Indeed, commissarism has become the dominant form of politicization among Middle East militaries. The Iraqi and Syrian armed forces are notorious for their high degrees of politicization, and the problems this has caused for military performance.<sup>7</sup> In particular, observers have noted the predominance of *Sunni* Arabs in Iraq's Republican Guard and Air Force as well as the large number of Iraqi officers from Saddam's home town of Tikrit.<sup>8</sup> At one point in the late 1970s, the Iraqis went so far as to deliberately imitate the Soviet political commissar system by attaching Baathist "political officers" to military units.<sup>9</sup> In Syria, similar favoritism is shown to members of Assad's Alawi sect who fill most key command slots and dominate the Syrian Air Force and key regime protection units such as the 3rd, 569th and Republican Guard Armored Divisions.<sup>10</sup> When Nasser finally gained control of Egypt he immediately packed the high command of the armed forces with fellow Free Officers, and in one of just a number of extreme moves, he promoted his friend 'Abd al-Hakim Amer from the rank of major to major-general and made him commander-in-chief of the Egyptian armed forces.<sup>11</sup> The Saudi military goes to extraordinary lengths to

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<sup>6</sup> By arguing that political involvement in military matters can be pernicious I am not attempting to overturn the Clausewitzian dictum of the political direction of military operations. My concern is with military effectiveness, a different issue altogether from what Clausewitz was discussing. Clausewitz' admonitions are addressed to the need for political objectives to determine military strategy. My concern is how well the military goes about executing its strategy. Whether or not the military strategy adequately serves the political objectives is, essentially, irrelevant to my study. For example, whether or not Egypt's military strategy of a limited offensive across the Suez canal in 1973 effectively served Sadat's objectives in going to war is irrelevant in assessing military effectiveness. What is important for my study is how well the Egyptians did in trying to implement their strategy of a limited offensive across the Suez.

<sup>7</sup> Amatzia Baram, "The Future of Ba'thist Iraq: Power structure, Challenges, and Prospects," in Robert Satloff ed., *The Politics of Change in the Middle East*, (Boulder: Westview, 1993), p. 36; Alasdair Drysdale, "The Syrian Armed Forces in National Politics: The Role of the Geographic and Ethnic Periphery," in Kolkowicz and Korbonski eds., pp. 52-62; Pascal, et. al., p.41; and Martin Van Creveld, "The Human Dimension of War," in *The Lessons of Recent Wars in the Third World*, ed. Robert Harkavy and Stephanie Neuman, Vol. 2, (Lexington, Ma: Lexington Books, 1987), p. 80.

<sup>8</sup> Baram, p. 36; Hanna Batatu, "Political Power and Social Structure in Syria and Iraq," in Samih K. Farsoun ed., *Arab Society: Continuity and Change*, (London: Croom Helm, 1985), pp. 40-45; Be'eri, p. 329; Uriel Dann, "Foundations of the Ba'th Regime in Iraq since 1968," in Itamar Rabinovich and Haim Shaked eds., *From June to October*, (New Brunswick: Transaction Books, 1978), pp. 309-315; Fuad I, Khuri, "The Study of Civil-Military Relations in Modernizing Societies in the Middle East: A Critical Assessment," in Kolkowicz and Korbonski eds., p. 22; John S. Wagner, "Iraq: A Military Assessment," in Richard Gabriel, ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, Ct: Greenwood Press, 1983), pp. 63-78.

<sup>9</sup> Batatu, p. 45.

<sup>10</sup> Batatu, pp. 37-40; Be'eri, p. 336; Anthony Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, pp. 45-46; Drysdale, p. 52, 69; Michael Eisenstadt, *Arming for Peace? Syria's Elusive Quest for Strategic Parity*, Policy Paper No. 31, (Washington, DC: The Washington Institute for Near East Policy, 1992), pp. 57-61; John Keegan, *World Armies*, (London: MacMillan, 1979) p. 687; and Itamar Rabinovich, "Continuity and Change in the Ba'th Regime in Syria," in Rabinovich and Shaked eds., esp. pp. 220-221.

<sup>11</sup> Be'eri, p. 108.

ensure that its troops cannot mount a coup. The primary function of the Saudi Arabian National Guard (SANG) is to protect the regime, and to ensure its loyalty, the SANG is recruited entirely from Najdi tribes loyal to the House of Sa'ud.<sup>12</sup> Even in Jordan, the first military priority is assuring the loyalty of the military. The Jordanian Army is purposely kept small and recruits heavily from its minority Bedouin and Circassian populations who are loyal to the King but otherwise tend to ignore domestic politics.<sup>13</sup> This despite the fact that it is the Jordanian Palestinians who are the most urbanized, best educated, and most technically skilled in the population.<sup>14</sup>

### **The Effects of Commissarism on Military Effectiveness**

Commissarism almost invariably has a profound impact on military performance and only in a negative way.<sup>15</sup> Fearful of the power of the military, commissarist regimes regularly place political cronies in key leadership positions. They stress loyalty over competence in promotions and may launch comprehensive purges to oust suspected officers who slipped through their screening programs or who the regime believes are no longer quite so loyal. The regime may conduct frequent, abrupt rotations of command billets, suddenly reassigning officers from one post to a totally different command to prevent officers from cultivating the personal loyalty of their units (which they then could conceivably use to overthrow the regime). Commissarist regimes often suspect that even a relatively minor setback in battle is a sign of the disloyalty of the commander and will remove the officer in charge. Commissarist regimes also intervene constantly in the most minor technical military decisions to ensure that the armed forces are prosecuting the war as demanded by the regime.

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<sup>12</sup> Adeed Dawisha, "Saudi Arabia's Search for Security," in Charles Tripp ed., *Regional Security in the Middle East*, (London: IISS, 1984), p. 16; Thomas L. McNaugher, "Arms and Allies on the Arabian Peninsula," *Orbis*, Vol. 28, No. 3, Fall 1984, pp. 503-504; Peter Wilson and Douglas Graham, *Saudi Arabia: The Coming Storm*, (Armonk, NY: M. E. Sharpe, 1994), p. 146.

<sup>13</sup> Be'eri, p. 345; Trevor Dupuy, *Elusive Victory*, (NY: Harper and Row, 1978), p. 378; Richard Gabriel, ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, CT: Greenwood Press, 1983), pp. 29-35; Lunt, pp. 29-50; and Amos Perlmutter, *Egypt: the Praetorian State*, (New Brunswick: Transaction, 1974), pp. 56-57.

<sup>14</sup> Pascal, et. al. p. 41. The Jordanian example brings up an important point. There is a widespread phenomenon among Middle East militaries of favoring one or more ethnic and religious groups over others in the military. In some cases, entire ethnic/religious groups may be discriminated against or excluded altogether from certain units or branches of the military. Thus to continue with the Jordanian example, Jordanian Bedouin dominate the combat arms of the Jordanian military while Palestinians are relegated to the supporting missions. Similarly, *Sunni* Arabs dominate the Iraqi officer corps, the Republican Guard, the Air Force, and other key units while *Shi'ah* Arabs are relegated to line infantry formations. I consider this pattern of activity to be part of commissarist military behavior. The segregation of ethnic and religious groups is a conscious effort by the regime to minimize the threat of a military coup by structuring the armed forces such that loyal ethnic and religious groups occupy those positions potentially most threatening or useful to the regime. Amman keeps Palestinians out of the combat arms for fear they would use such positions to try to overthrow the Hashemite monarchy. Similarly, Iraq tries to minimize the numbers of *Shi'ah* in the officer corps or the Republican Guard to minimize the threat to the regime. [For sources on Jordan, see footnote 14 above. For sources on Iraq see footnotes 7, 8, and 9 above.] Once again, the patterns of behavior these discriminatory practices create are entirely consistent with more traditional forms of commissarist-style politicization.

<sup>15</sup> On the effects of politicization of the military, the classic works remain Morris Janowitz, *The Professional Soldier*, (NY: The Free Press, 1960), and Huntington, *The Soldier and the State*, Op. cit. On the specific issue of the impact of commissarism on military effectiveness, I have encountered only one work that addresses this topic. This is David Rapoport's "The Praetorian Army: Insecurity, Venality, and Impotence." (Unfortunately, Rapoport refers to this phenomenon as "praetorianism," see footnote 5 above.) Rapoport also notes the incredible dearth of scholarly work addressing the impact of politicization on the military.

As evidenced by this list of pathologies typical of commissarist regimes, this variant of the theory of politicization of the military makes a number of predictions regarding the likely performance of Arab armed forces. In many cases, I have drawn these predictions from the extant literature on praetorianism. However, in other instances I have deduced them by extrapolating from known pathologies to likely battlefield performance. A number of these hypotheses predict identical patterns of behavior to those predicted by the theory of cultural origins of Arab military ineffectiveness.

#### *Centralization of Authority*

To keep a tight grip on the military, we should expect to find a *high degree of centralization of authority, and unwillingness to delegate authority to (less-politically reliable) lower-levels of command*. This is one of the defining features of a commissarist military. The commissarist regime fears an independent military because this freedom allows for the possibility that the military will turn on the regime. So the regime places its most trusted personnel in the top command slots of the armed forces and then drastically centralizes all authority to ensure that all important decisions are made by those trusted personnel. Thus, according to this theory, all decision-making authority in Arab militaries ought to be concentrated in the hands of the high command, and all personnel should be forced to submit all decisions up the chain of command to the highest levels. In particular, the need to refer all issues up the chain of command for a decision and then back down for implementation should make Arab operations slow and cumbersome.

#### *Initiative*

The extreme centralization of control should make lower ranking personnel fear punishment, including execution, for acting independently and so should defer all decision-making to higher authority. Also, because any popular, highly competent and motivated senior officer is a potential leader of a coup he may be removed by the regime even if there is no evidence he was planning to seize power. Consequently, most senior officers should be loathe to reveal themselves as aggressive and effective, and therefore, we should expect to find *little initiative among the highest echelons of the officer corps*. Based on this tendency, we should expect to find that Arab armies do not respond well to unexpected moves by their adversary, and may not respond at all.

An important exception to this rule is that there is no particular reason why Arab armed forces should not counterattack when their defensive lines are threatened with a breakthrough. The key motive of officers in commissarist militaries, according to the theory, is fear of punishment. An officer can be punished either for succeeding too much or too little, and catastrophic defeat usually is rewarded with execution. Consequently, catastrophic defeat is to be avoided at all costs. Therefore, unless the commander is an incompetent (see the section on Generalship, below) he should be expected to counterattack an enemy penetration to prevent it from becoming a full-scale breakthrough. Likewise, in other instances where passivity would result in an obvious disaster, we should expect to find Arab military officers acting aggressively to stave off defeat.

#### *Passivity of Enlisted Personnel*

In contrast to the expected lack of initiative among the higher echelons, there is no particular reason why enlisted personnel should slavishly obey officers whom they recognize as incompetent and unconcerned with the safety of their men. Enlisted personnel may not necessarily obey their officers, and may refuse to comply with orders they consider to be egregious. This has been the pattern in other politicized militaries. In particular, during coups and revolutions in the extremely heavily politicized militaries of

Latin America it has frequently been the case that soldiers have turned on their officers when the officers favored a course other than that favored by the troops.<sup>16</sup>

Consequently, Arab armed forces are unlikely to act beyond their specific orders, and are likely to flee at the first sign of danger. In addition, when communications are severed between higher authority and field formations, Arab tactical units should run rather than staying to fight or even doing nothing. The central model of the commissarist theory is troops (and junior leaders) forced into war by a hated dictator and led by incompetent generals. As a result, we should expect their soldiers to run whenever something goes wrong and they are no longer under the direct control of higher authority. Rather than go into a battle in which they have no interest and led by commanders they know to be incompetent, when given an excuse to run, soldiers in a commissarist military should take it.

### *Generalship*

Because commissarist regimes will seek to put their most trusted people into the top military command slots, we should expect their armies to suffer from poor generalship. After all, commissarist regimes tend to place their loyalists in the military command regardless of their competence. To a certain extent, military incompetence may be seen by the regime as a *desireable* quality because it renders any general that much less of a threat to the regime.<sup>17</sup> Even those officers who come up through the ranks are likely to be very mediocre because commissarist regimes stress promotions based on loyalty rather than merit and probably will purge competent senior officers for fear that they will be able to effectively mount a coup. Consequently, the theory predicts that *Arab generals should be inept and unprofessional*. For this reason, Arab military operations should be poorly planned and poorly conducted. Strategic decision-making should be inept and should greatly contribute to the loss of the war. The command decisions made by the General Staff should be misguided and simplistic.

### *Innovation and Creativity*

The same factors may also *dampen the willingness of senior officers to innovate* on the battlefield, because being too successful in battle and showing too much creativity might arouse the suspicion of the regime. Therefore, Arab armed forces should employ rather simplistic approaches to problems--approaches that can easily be defeated by a skilled opponent. By the same token, there is likely to be some limit on this tendency. In particular, because the regime is likely to shoot anyone who fails catastrophically, bright commanders may aim for a specific level of mediocrity, at which they are not considered so brilliant they are a threat and are not considered so inept that they are shot "to encourage the others." Therefore, Arab officers should demonstrate some creativity and improvisational ability in attempting to prevent catastrophic defeats. For the most part, Arab armies should try to win their battles just barely, but should try to avoid winning them too handily or losing them too badly and are likely to show real creativity to prevent either extreme.

### *Maneuver*

Given the tendencies for officers in commissarist militaries to resist innovating and taking initiative, it seems unlikely that they would be willing to employ much maneuver on the battlefield. Maneuver is an inherently risky operation. It tends to be more decisive than simple, grinding frontal assaults and static defenses. If a frontal assault fails, you can always retreat back to your own lines--assuming you have the good

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<sup>16</sup> For a description of this phenomenon, see Be'eri, pp. 260-268.

<sup>17</sup> For a concurring view see Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," p. 261.



sense to call off the attack before all of your troops are butchered. Attempting to maneuver against an opponent risks your force being cut off by a counter-maneuver by the enemy, resulting in disaster. On the other hand, a successful maneuver could result in the decisive defeat of the enemy. Officers who are not predisposed to risking either the complete destruction of their forces or a decisive victory that would give them a dangerous reputation for competence, would probably be far more willing to simply defend, attacking only when ordered, and then making only deliberate frontal assaults. Hence, we should find that *Arab commanders are not particularly willing to employ maneuver in combat*. When ordered to attack or when counterattacking, Arab commanders should mostly conduct simple frontal assaults, and when defending they should simply defend in place.

#### *Ad Hoc Operations*

Together, the fear of both innovation and taking initiative, plus the likely prevalence of incompetent officers, should produce an *inability to plan and execute ad hoc operations*, particularly among the strategic leadership. Arab armies should have difficulty planning new operations "on the fly" in response to unforeseen circumstances. Their plans should be issued slowly and haphazardly, and should mostly fail to get the job done. However, there is no reason that the execution of these plans should necessarily be terrible, except to the extent that the plans themselves are so bad that they hinder the implementation.

#### *Set-Piece Operations*

Because of the likelihood that the top commanders will be inept political hacks who rose because of their mediocrity rather than despite it, we should expect to find that *commissarist militaries make a real mess of set-piece operations*. Ultimately, ad hoc operations rely more on the skills of their junior officers, because in a fluid situation there is only so much guidance the senior commanders can provide and thus authority devolves upon the local commanders by default. In set-piece operations, because the operation is planned in detail beforehand, success and failure is far more dependent on the capabilities of the senior commanders and their staffs. Consequently, Arab militaries should badly bungle set-piece operations, and they should do so because the plan and strategic direction are bad, rather than because the tactical forces are incapable of implementing the plan.

#### *Air-to-Air and Air-to-Ground Operations*

Modern military aircraft are extremely expensive pieces of equipment. First-line fighter aircraft normally cost between \$20 and \$40 million apiece. Military aircraft are also powerful weapons systems, capable of causing considerable damage. In addition, once a pilot has taken off from his airfield, it is difficult for his commanders on the ground to control his actions. If the pilot does not obey, the most the commander can do is try to shoot the disobedient pilot down--or scare him into doing what he is told--but this too is tough because, unless the country possesses a very sophisticated and comprehensive air defense system, it should not be too difficult for a decent pilot to evade his pursuers.

For all of these reasons, the obedience and loyalty of military pilots is a very important consideration. This is particularly true in autocracies in which most people lack strong feelings of patriotic obligation to the government. The solution of most despots, therefore, is to heavily politicize their air force pilots. In order to avoid the embarrassment of having a disloyal pilot defect in a \$35 million aircraft to another country, as well as to prevent the real danger that disloyal air force officers will attempt to use their aircraft to attack the regime, most dictators go to extraordinary lengths to ensure the loyalty of their pilots. Thus, in most commissarist systems, the political reliability of a pilot candidate is a far more important qualification than any aptitude for

flight operations. This tendency also holds true in determining which pilots will be allowed to fly which aircraft (pilots of combat aircraft usually need to demonstrate greater loyalty than those of support aircraft) as well as promotions and command assignments.

Clearly, this stress on loyalty over competence among pilots in commissarist air forces does not bode well for combat missions. Combat pilots require a wide range of specific skills, which is why combat pilot criteria in most of the world's air forces are so strict. The practice of commissarist militaries of stressing political reliability over the possession of these uncommon but extremely important skills suggests pilots in commissarist militaries are unlikely to be the best qualified for the job. As a result, we should expect *Arab air forces to do poorly in both air-to-air and air-to-ground operations because of the mediocre quality of their pilots.*

### *Information Flows*

Highly suspicious regimes often view military reverses as dangerous because they could be taken as signs of weakness by the regime's enemies. In fact, there is a consistent historical pattern that such regimes tend to execute unsuccessful generals "to encourage the others." Consequently, we should expect members of politicized militaries to consistently *lie, exaggerate and shift blame to cover their mistakes.* To the extent that they are suffering from commissarist politicization, Arab militaries also should suffer from a constant distortion of information across the chain of command. In particular, commanders should be unwilling to divulge information that casts a bad light on their actions. They should blame others for their mistakes or else blame forces beyond their control.<sup>18</sup>

### *Officer Rotations*

We should see a *constant pattern of sudden rotations of unit commanders,* especially among the commanders of larger units like corps, divisions and possibly even brigades. Commissarist regimes tend to be extremely wary of leaving military officers in command of units for too long because of the threat that a lengthy tour will allow the commander to become so popular with his troops that he could lead them in a revolt against the regime. Consequently, commissarist regimes tend to keep command postings fairly brief, except for the most trusted officers, who may stay in key leadership slots for decades. In one extreme example of this tendency, the Dominican Republic's Rafael Trujillo regularly rotated the billets of all of his senior officers every 3 months.<sup>19</sup> In addition, to disrupt the plans of potential coup plotters and to keep the entire officer corps on its toes, commissarist regimes often like to make these command rotations sudden and unannounced so that no officer can anticipate his next assignment and work the move into a plot.

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<sup>18</sup> This is not a cut-and-dried issue and demonstrates an area where culture intrudes on one of the other theories. Methods of distorting information are likely to be culturally derived regardless of the political forces at work. In other words, while fear of punishment may drive personnel to distort information, *how* that information is distorted is likely to be as much a product of societal values as anything else. For instance, in some cultures, individuals might acknowledge that a mistake was made but blame it on one of their colleagues, while in another culture it might be more acceptable to simply deny that a mistake was made, or deny that the event even occurred. In some cultures, it might be preferable to blame the calamity on the superiority of the enemy or divine intervention, while in other cultures it might be seen as an admission of weakness to give any credit to the enemy and divine intervention might be scoffed at. In short, in this and other instances, culture plays a considerable role. The political circumstances might prompt some form of behavior, but the specific form of that behavior will be left open, and therefore likely determined by other forces, culture first among them.

<sup>19</sup> Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," p. 261.

### *Morale*

One of the clearest predictions made by the commissarist variant of the politicization of the military theory is that *Arab armed forces should suffer from terrible morale*. Virtually every feature of a commissarist system works to destroy the morale of the military. There is the simple fact that the armed forces realize they are not trusted by the regime. The unique skills the military prizes above all else--the skills of war-fighting--are not necessarily valued by the regime, and are not made criteria for determining promotions and command assignments. The regime consciously tries to prevent officers from developing bonds between officers and their troops. Every man in the military suspects that his immediate superiors are less capable than he is because his superiors may very well have gotten to their positions through loyalty to the regime rather than demonstrated ability. Every soldier and officer in the military knows that the high command is probably made up of the least competent men in the armed forces--men who sometimes have little or no military training whatsoever. Since promotion has little to do with military competence, officers are likely to have little reason to spend time training and preparing their troops for combat, and so their troops may have to go into battle wholly unready for the missions they will be called on to perform. For all these reasons, the morale of commissarist militaries is normally very low.<sup>20</sup>

As a result, we should expect to find that the morale of Arab armies is very low at the beginnings of wars. Arab soldiers and officers should be unmotivated and their efforts half-hearted. They should put in a perfunctory performance and then flee (or even surrender) at the first opportunity. They should never choose death over retreat or capture. These problems can really only be gauged at the start of the war because thereafter, morale tends to be heavily influenced by other factors. Essentially, after the opening rounds of combat, morale tends to be determined by the course of the battle. Armies with extremely high morale at the start of a war may become despondent after initial battlefield losses, while unmotivated militaries may take heart after a series of easy victories. Likewise, poor or competent generalship may also have a pronounced effect on morale, as can the logistical situation. In short, the effects of politicization are likely to be most discernible at the start of the war, before the fortunes of combat can have their effect, than later on.

### *Personal Courage and Self-Sacrifice*

Many of the same factors that contribute to poor morale in commissarist militaries also diminish the willingness of soldiers and officers to risk their own safety to secure an important objective or to save a comrade. For instance, poor officer-enlisted relations--a hallmark of commissarist systems because officers are prevented from getting to know their troops and often see little reason to try to train them for war--is likely to dampen any willingness to sacrifice to fulfill the orders of the officers. Because in a commissarist system neither the regime nor the military is likely to represent the will of the people, the soldiers and junior officers may not identify with the goals of the war. Finally officers are unlikely to order last ditch defenses or desperate assaults, in the knowledge that no

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<sup>20</sup> Unfortunately, morale is an extremely difficult element of military performance to measure, especially when one is forced to rely largely on secondary source material. Morale can really only be gleaned by hearing the feelings of the officers and men. Where they are available, interviews with participants can shed light on the question of morale, but unless such interviews are fairly extensive, we risk getting only an unrepresentative sample of actual army-wide morale. Of course, extremes of morale often can be discerned from other indicators. For example, extremely poor morale may be deduced from extraordinarily high desertion rates. However, because the extremes of morale are rare by definition, and because there are few sources available--primary or secondary--that actually present comprehensive evidence regarding the sentiments of the actual soldiers and officers in Middle East wars, it is difficult to accurately gauge the morale of Arab militaries in combat. For the most part, I have had to rely on fragments gleaned from secondary sources, many of which do not indicate how they derived their assessments of morale.

one else is likely to give his unit any help, nor is he likely to be rewarded for succeeding. This being the case, we should expect to find *little personal bravery and self-sacrifice in Arab militaries*.<sup>21</sup>

Some might claim that commissarism ought to cause military personnel to perform with a sense of "false bravery." That is, they might argue that in severe commissarist systems soldiers and officers would feel that if they don't fight hard they will be shot or otherwise punished thus they might as well fight hard because then they will at least die an honorable death in combat, and they might even win. I think this idea is nonsense. First, few people are quite so coldly rational, especially in the heat of combat. In battle, if a man is committed and enthusiastic he will fight hard, if not he will run: this is an instinctive reaction to the chaos and terror of combat, and it tends to quickly crowd out any rational calculations regarding maximum utility. Second, historically, slave armies (i.e. those driven into combat by threat of death, not specially-trained forces of military slaves such as the Mamlukes or the Janissaries) have fought extremely poorly because they had exceedingly low morale and made no particular effort to sacrifice for the mission. Third, even the most brutal dictatorships cannot execute an entire army if it begins running, and many cases of cowardice in battle go unnoticed or unpunished, consequently it is entirely reasonable for any soldier to believe he will not be punished for not showing bravery in battle. Finally, even among soldiers who do fear punishment, all they need to do to avoid the lash is fight: there is no reason for them to perform "above and beyond the call of duty." Consequently, they probably will do their job while all goes well and then look for the first opportunity to run or surrender.

### *Unit Cohesion*

As with morale, and personal bravery, the commissarist form of politicization of the military predicts that *Arab armies should suffer from very poor unit cohesion*. Many of the same forces that contribute to poor morale and low personal bravery also erode unit cohesion. These include officer-enlisted frictions, the frequent rotations of commanding officers, and the potential lack of confidence of soldiers and officers in their leaders. In addition, in commissarist militaries there is normally a pervasive atmosphere of mistrust and deception created by the presence of regime informers and the powerful incentives to lie and shift blame for mistakes, both of which are highly corrosive to unit cohesion.<sup>22</sup> In

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<sup>21</sup> I considered the possibility of using personal bravery as a surrogate measure for morale, but ultimately rejected this idea. Extremely poor morale is often associated with extremely low levels of personal bravery and self-sacrifice. After all, if officers and men don't care about each other, if no one cares about the goals of the war, and if it is clear that political and military leadership don't really care about the troops in the trenches, why bother jumping on a grenade or storming a bunker single-handed? Similarly, extremely high morale is often accompanied by large numbers of acts of personal heroism and self-sacrifice. There is a strong tendency for men who believe in each other and their officers, who believe in the goals for which they are fighting, and who believe in the abilities and concern of their leaders, to be willing to risk their own safety to secure an objective or to save a comrade. Thus personal bravery can be a good indicator of overall morale.

However, the two are not synonymous. It is entirely possible to have instances of an army with extremely poor morale showing high rates of personal bravery and self-sacrifice. By the last years of the Second World War, the Japanese Army had become increasingly demoralized, but the soldiers and junior officers never ceased to show tremendous personal bravery and self-sacrifice. While the numbers of Japanese who were willing to surrender increased as the war dragged on and their impending doom became more obvious, the absolute numbers of those who surrendered remained remarkably small. For this reason I ultimately decided it was not reasonable to use personal bravery as a surrogate for morale.

<sup>22</sup> In the case of unit cohesion as well, I considered whether this could be used as a surrogate to measure morale, and once again rejected the idea. As with personal courage, morale can be a major contributor to unit cohesion and there are some factors that cause similar fluctuations in both morale and unit cohesion. However, it is also true that unit cohesion can be a major contributor to the status of morale, and that there

particular, it should be the case that Arab officers should show little concern for their men and should desert at the first sign of trouble, which should in turn cause their units to disintegrate.

#### *Intelligence Collection and Analysis*

One truism about brutal dictatorial regimes is that their advisers tend to tell them what they want to hear. Because no one wants to be the bearer of bad news, there is an overwhelming tendency for intelligence services to politicize their analysis along the lines of the preordained beliefs of the leadership. The strong incentives for personnel in a politicized military to falsify, conceal, and exaggerate to cover mistakes also contribute to the confused picture of the battle the leadership is likely to receive. Moreover, because analysis tends to be based on what the regime wants to hear, and no one wants to unearth the ugly truth, there is often little incentive to conduct comprehensive, aggressive intelligence collection operations. Consequently, we should find that *Arab militaries do a superficial and haphazard job of intelligence collection and that analysis of military intelligence is extremely poor and skewed toward the perceived biases of the regime.*

#### *Combined Arms*

Combined arms cooperation is not something that comes naturally to any army. Proper integration of the various combat arms can only be achieved through constant training. Because officers in commissarist systems have little incentive to spend their time training troops, and they do have an incentive to attend to other activities--such as trying to impress politically powerful superiors--combined arms cooperation is likely to suffer because of inadequate training. In addition, combined arms operations require trust and confidence in officers from different units or even different services. The mistrust and rivalries endemic to commissarist militaries should make such qualities a rarity. In short, we should expect to find that *Arab armies are unable to adequately integrate various combat arms into true combined arms operations.*

However, in those situations in which the regime insists that its officers pay adequate attention to training and attempts to teach proper combined arms coordination, there is little reason for this not to produce good combined arms operations. Mistrust and rivalries aside, if the regime orders its officers to concentrate on proper training, and punishes those whose units fail to demonstrate good combined arms integration, this change in the incentive structure should produce competent combined arms operations. Or perhaps, more precisely, this ought to remove most of the problems created for proper combined arms operations by commissarism.

#### *Inter- and Intra-Service Coordination*

Elements of commissarist militaries tend not to coordinate their actions well as a result of both conscious and accidental policies of the regime. On the one hand, the ubiquitous mistrust and secrecy characteristic of commissarist systems makes commanders unwilling to trust their fellow officers to act in concert with them. On the other hand, many commissarist regimes purposely foster rivalries between different armed services as well as among officers within the same services to prevent the military from acting monolithically, thereby reducing the ability of the military as a whole--or a segment of the military--to move against the regime. As a result, we should expect *Arab military units and even entire services to coordinate their combat operations poorly.* Arab military operations should be disjointed and fragmented, and Arab military forces should consistently fail to provide support to one another.

#### *Command and Control Arrangements*

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are factors that only influence unit cohesion or morale but not both. Thus I concluded it would not be plausible to use unit cohesion as an indicator of morale.

Another common commissarist method paranoid regimes impose on their armies is to distort command and control arrangements to prevent the military from being able to effectively move against the government. Some regimes are loathe to create higher echelon formations, fearing that these powerful positions can serve as the springboards for ambitious senior officers hoping to stage a coup. Consequently, such regimes may have fewer division, wing, corps, airbase, army, and air force headquarters than would otherwise be required to control the number of brigades, squadrons, and other sub-formations the military can muster. In other cases, the regime might just not allow the creation of these formations, instead finding alternative arrangements or placing large numbers of smaller formations under the command of much higher level headquarters commanded by regime loyalists. Indeed, to some extent, the number of trusted senior officers is likely to determine just how many such senior field commands the regime is willing to create.

Another manner in which this problem is manifested is for regimes to create ambiguous and overlapping command arrangements. Autocrats frequently blur the lines of command to make it difficult for field commanders to act independently and decisively. If the units nominally under their command also answer to another master, or if they require another officer's approval to make any move, it will be extremely difficult for any ambitious general to employ the troops under his command to overthrow the government. Therefore, *Arab militaries should suffer from bizarre, convoluted, and overlapping command and control arrangements.*

### **Additional Predictions of the Commissarist Theory: The Big Picture**

Having laid out the specific predictions of the commissarist variant of the politicization theory as they pertain to actual patterns of combat performance, it is now appropriate to step back and note four other predictions of the commissarist variant regarding more general issues.

#### *Congruence Across the Arab World*

As in the case of the Arab culture theory, the predictions of the commissarist variant should hold true to a greater or lesser extent for all Arab states at war. As noted previously, commissarism is a universal feature among Arab militaries. Even the extreme praetorian governments of the region have sought to micromanage military operations and shift personnel to ensure the loyalty of the armed forces to the dictator. Thus because all Arab militaries suffer from commissarism, the expected patterns of military effectiveness predicted by the theory should remain fairly constant across the Arab world.

However, while commissarism has essentially been a constant in postwar Arab politics, its intensity has varied tremendously. Initially, many of the Arab militaries made only haphazard and amateurish efforts to ensure the loyalty of their militaries. Later, they imposed far more draconian and commissarist systems on their armed forces. In addition, in the case of many of the Middle East militaries, at certain points, their regimes made a conscious effort to lift the commissarist blanket from their armies, specifically to improve their military effectiveness. Iraq in the mid-1980s and Egypt in the late 1960s went furthest, while Jordan and Syria in the early 1970s made more modest efforts. The politicization theory would predict that Arab military effectiveness should decline as commissarist controls were clamped down tighter, and should improve as commissarism was loosened. Moreover, the areas of improvement or decline should come in those categories of military effectiveness most heavily influenced by commissarism: generalship, morale, command and control problems, etc.

#### *Congruence with Non-Arab Commissarist Militaries*

Just as it should be true that all of the Arab militaries should perform poorly in combat when afflicted by commissarism, so too should non-Arab militaries that also suffer from commissarist politicization. That is, the armed forces of other nations that

impose commissarist controls should fare equally poorly in combat, and should manifest the greatest problems in the same areas of military effectiveness as the Arab militaries. After all, if the problem is commissarism and not anything unique to the Arab states, then other non-Arab commissarist states should manifest the same problems in combat as the Arabs.

### *Only Negative Predictions*

Commissarism is wholly pernicious to military operations. Commissarism is designed to secure a political objective of the regime--control of the military--and it does this at the expense of military proficiency. There is simply no way commissarism can help the combat performance of a military. All of the major facets of a commissarist system, including the emphasis on loyalty to the regime ahead of merit, the fear of competent commanders, the frequent purges of officers, the skewed command and control arrangements, and the desire to prevent officers from winning the trust and loyalty of their troops, are antithetical to the efficient functioning of military organizations. Consequently, the commissarist variant of the politicization theory makes only negative predictions regarding military effectiveness. This is an important difference between the commissarist theory and the Arab culture theory, which makes positive predictions regarding certain aspects of Arab military effectiveness.

### *Greatest Impact at Higher Levels of Command*

Another important difference between the commissarist politicization theory and the Arab culture theory is where in the chain of command the greatest problems are likely to arise. A critical trait of commissarism noted in many of the above hypotheses is its tendency to have the greatest impact at the highest levels of command, with diminishing impact at lower ranks. Political leaders are most concerned with senior commanders because their rank and experience make it more likely they could organize a move against the ruler. It is extremely difficult to mount a successful coup without the participation of high-ranking officers. Even coups organized by junior officers almost invariably feel it necessary to secure the cooperation of a senior officer because only they have the prestige and recognition to gain the loyalty of the Army, and hopefully the populace as well. Thus the Free Officers needed General Naguib, the Iraqi Ba'thists needed Hasan al-Bakr, the Syrian Ba'thists needed Amin al-Hafiz, and the various Yemeni officer cadres were forced to throw in their lot with General Sallal.

Senior military positions also are the easiest to politicize because there are relatively few of them. Conversely, despite the best efforts of authoritarian regimes, it is virtually impossible to ensure the loyalty of every captain and lieutenant because there are so many of them, and so few have been in a position to show their political stripes. Also, the much smaller threat posed by junior officers typically makes even the most paranoid regimes willing to tolerate junior officers with more competence than loyalty. An excellent example of this was Saddam Husayn's willingness during the Iran-Iraq war to recall to active duty many junior officers previously dismissed for suspected disloyalty.<sup>23</sup>

Empirical evidence regarding the behavior of politicized militaries overwhelmingly supports this point. For example, during the purges of the Soviet military in the 1930s, the higher ranks suffered proportionately greater losses than the lower ranks. Of five marshals of the Soviet Union only Stalin's two inept cronies, Budenny and Voroshilov survived. Of eighty members of the 1934 Military Soviet, seventy-five had been purged (94%) by 1938. All eleven Deputy Commissars for Defense were eliminated, as well as every military district commander. Thirteen of fifteen army commanders (87%), fifty-seven out of eighty-five corps commanders (67%),

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<sup>23</sup> William O. Staudenmaier, "Defense Planning in Iraq: An Alternative Perspective," in Neuman, p. 54.

110 out of 195 divisional commanders (56%), and 220 out of 406 brigade commanders (54%) were also purged by 1938.<sup>24</sup> Clearly, even in this most outrageous of purges, the axe fell most heavily on the highest echelons of the officer corps with lighter and lighter blows further down the chain of command.<sup>25</sup>

Politicization produced dramatic swings in Soviet military performance at the strategic level throughout the Stalinist era, but had little discernible impact on Soviet tactical forces. Soviet military performance at the strategic and operational levels was awful until roughly 1942 as a result of the purges. Soviet victories, such as they were, invariably were the products of exceptional generals or of overwhelming mass, or both. For instance, the Soviets were consistently outfought by the Japanese in the Far East until the highly-capable Zhukov's arrival on the scene, resulting in the dramatic victory at Khalkin Ghol in 1939. The Russo-Finnish war was a disaster, which the Russians were only able to "win" by bludgeoning the Finns with superior numbers, while the initial German offensives in 1941 and 1942 were unmitigated catastrophes for the Soviets. Throughout all of these campaigns, Soviet strategic direction was abysmal. The only exceptions to this rule were flukes--competent generals who miraculously survived the purges, like Timoshenko--and officers who rose to senior command as a result of the "headroom" created by the purges and who just happened to be competent generals, such as Zhukov. This endless procession of failures came to a rather abrupt end in 1941-1943 when Stalin began sacking (in some cases shooting) the political cronies he had appointed during the purges, and promoted capable, lower-ranking officers such as Koniev, Malenovsky, Chuikov, Sokolovski, and Rokossovski, to the senior slots. In other words, when commissarism was at its peak, Soviet senior leadership was miserable, but when Stalin loosened the commissarist reins, it improved quickly.

By contrast, from the early 1930s to the end of World War II, Soviet tactical performance remained pretty poor--there was improvement, but it was not as impressive as stunning operations like the Stalingrad encirclement in 1942 or the Byelorussian campaign of 1944 would suggest. Indeed, much of the improvement in Soviet tactical capabilities can be ascribed to the reorganization of the military between 1941 and 1943 along more modern lines and the tremendous increase in the quality and quantity of equipment fielded by the Red Army during that same period.<sup>26</sup> Consequently, the rise and fall of Soviet commissarism produced dramatic changes in Soviet strategic leadership, but had no impact on tactical performance.

The politicization of the German military between 1933 and 1945 also illustrates the tendency of commissarism to fall most heavily on senior ranks and to have only very limited impact on lower ranks. Hitler accomplished his initial politicization of the German army by eliminating and reorganizing the highest ranks of the military, essentially just the Army General Staff, "without alienating the bulk of the officer corps

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<sup>24</sup> Alan Clark, *Barbarossa: The Russian-German Conflict, 1941-1945*, (NY: Quill, 1965), p. 34.

<sup>25</sup> John Erickson also provides a good account of the greater impact of politicization (and the purges in particular) on the higher echelons of the Soviet military in the early years of the Second World War. John Erickson, *The Road to Stalingrad: Stalin's War with Germany, Vol. I*, (London: Weidenfeld and Nicolson, 1975), pp. 7-19.

<sup>26</sup> On the poor performance of Soviet strategic leadership prior to depoliticization in 1941-1943, see Clark, pp. 42-149; Christopher Donnelly, *Red Banner: The Soviet Military System in Peace and War*, (Alexandria, VA: Jane's Publishing Inc., 1988), pp. 82-139; Erickson, pp. 7-63, 101-342. On the improvement in strategic leadership following depoliticization, see Paul Michael Bremner, "Soviet Troop Control: The Debate from 1963-1973," SM Thesis, Massachusetts Institute of Technology, 1984, p. 264; Clark, pp. 149-465; Erickson, pp. 342-472; John Erickson, *The Road to Berlin: Stalin's War with Germany, Vol. II*, (London: Weidenfeld and Nicolson, 1983). On the general lack of improvement in Soviet tactical performance throughout this period, see Clark, entire; Donnelly, pp. 82-138; Erickson, *The Road to Stalingrad*, entire; Erickson, *The Road to Berlin*, entire; and John Erickson, Lynn Hanson, and William Schneider, *Soviet Ground Forces: An Operational Assessment*, (Boulder, CO: Westview, 1986), pp. 16-28.



or disturbing the foundations of professional efficiency which had been laid by Seeckt."<sup>27</sup> Hitler constantly micromanaged the operations of the German military, sacked senior commanders who opposed him or conducted even tactical retreats (as befell von Rundstedt after his withdrawal from Rostov in 1941), and ensured that the very highest slots in the military were held by lackeys such as Goering, Keitel, Zeitzler, and Jodl. However, Hitler's micromanagement of military operations generally remained above corps or division level--although during the Polish campaign he inspected orders down to regiment level--and he rarely interfered with promotions below general officer levels. While the strategic performance of the German army frequently suffered as a result of the Führer's interference, German tactical units performed superbly throughout, showing none of the problems of commissarist politicization of the military that so afflicted German strategic decision-making.<sup>28</sup>

The highly politicized militaries of Latin America have uniformly manifested the same tendency. The Honduran defeat in the 1969 war with El Salvador was largely the responsibility of the inept leadership provided by the Honduran high command. In the aftermath of this conflict, Honduran junior officers pressed for a depoliticization of the military that would allow for an improvement in the senior leadership.<sup>29</sup> Similarly, in El Salvador in the late 1970s, the senior command slots were so horribly politicized that the junior officers attempted a coup intended to install a democratic-technocratic government that would allow the military to disengage from politics and devote itself entirely to combat operations. In the early 1980s, Washington also concluded that the poor performance of El Salvadoran units was a result of incompetent strategic direction stemming from the severe politicization of the senior officers. The US pressured the El Salvadoran military command to give up control of these operations to the junior officers who were far more professional and competent. El Salvadoran counter-insurgency operations picked-up considerably after this was accomplished.<sup>30</sup> Remarkably, the high command of the Argentine military recognized that they simply were not capable of effectively prosecuting a counter-insurgency campaign and so in the 1970s, they began to encourage their junior officers to take the initiative in fighting the insurgency, precisely because the junior officers were less politicized, and therefore more capable. In the Argentine case as well, the shift in responsibility to the junior officers led to a noticeable improvement in military effectiveness.<sup>31</sup>

The history of commissarism in the Middle East also supports the greater impact of politicization at higher levels of command.<sup>32</sup> In a study of 16 Middle Eastern states in the early 1960s, Manfred Halpern found a marked split between criteria for promotion at senior levels of command (primarily colonels and higher, but this varied) and criteria for promotion at lower levels. Among junior officers, the primary criteria for promotion were performance of duty, education level, time-in-grade, and competitive examination.

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<sup>27</sup> Clark, p. 20.

<sup>28</sup> Clark's *Barbarossa* is one of the best sources on the impact of Hitler's politicization of the Wehrmacht and its impact on German military effectiveness. On the military prowess of German tactical forces, also see Martin van Creveld, *Fighting Power: German and US Army Performance, 1939-1945*, (Westport, Ct: Greenwood Press, 1982).

<sup>29</sup> James Dunkerley, "Central America: Collapse of the Military System," in Christopher Clapham and George Philip eds., *The Political Dilemmas of Military Regimes*, (London: Croom Helm, 1985), p. 196.

<sup>30</sup> Dunkerley, pp. 190-192.

<sup>31</sup> Katherine Swift Gravino and David R. Segal, "The Empire Strikes Back: Military Professionalism in the South Atlantic War," in James brown and William Snyder eds., *The Regionalization of War*, (New Brunswick: Transaction Books, 1990), p. 20.

<sup>32</sup> Please note that in the five case studies of Egypt, Iraq, Jordan, Saudi Arabia, and Syria, I will present further evidence of the diminishing impact of politicization of the military on lower levels of command as it is manifested in each of these specific countries. At this point, I provide only general evidence regarding this phenomenon in the Middle East so as to establish the universality of the phenomenon.

However, among senior officers the key criterion for promotion was political reliability, and in many armies this was the only criterion.<sup>33</sup> In addition, many have noted that it has traditionally been the case that officers of the rank of colonel and below usually lead Middle East coups. This evidence also supports the contention that politicization is much greater at higher levels of command. The general officer slots, because they are so obviously potential staging grounds for coup-plotters, are thoroughly politicized, but because regimes are less fearful of lower ranking officers and have much greater difficulty determining their political reliability, they often overlook the ambitious major or lieutenant colonel. In Rapoport's words, lower-ranking coup-plotters have the advantage of being, "too inconspicuous to draw the government's attention."<sup>34</sup>

Finally, further evidence of this tendency can be found in the experiences of the Iranian military under the last Shah. The Shah's army was thoroughly politicized in the commissarist vein, and this politicization was greatest at higher levels of command with diminishing impact the lower one went along the chain of command, down to the NCOs and *homafars* (warrant officers) who manifested little if any effects of commissarist politicization. Throughout his work on the rebuilding of the Iranian military after the Iraqi invasion, William Hickman argues that under the Shah, the higher echelons of the Iranian officer corps suffered heavily as a result of commissarist politicization while the junior levels were affected much less. For example, Hickman states that:

[Showing initiative] was the one factor likely to get a senior officer into serious trouble with the Shah. Ever conscious of the possibility of a military coup against him, the Shah constantly manipulated his senior officers, just as he did other politically influential members of Iranian society. If a senior officer attained a position from which he might derive too much power or influence, he was subject to rapid retirement, demotion, or transfer.<sup>35</sup>

Similarly, Edgar O'Ballance concludes that although the senior officers were political hacks who knew little about generalship, Iranian junior and mid-grade officers were considered by US and British advisers to be "reasonably efficient."<sup>36</sup> Elsewhere, O'Ballance notes that during the first campaigns of the Iran-Iraq war Iranian junior officers fought very well, especially when compared to their Iraqi opposites, and showed few, if any, of the effects of politicization.<sup>37</sup> Moreover, when the *mullahs* grudgingly agreed to depoliticize the Iranian high command in 1981-1982, the new Iranian generals proved flexible and capable, and devised highly innovative tactics that allowed them to rout the Iraqis.<sup>38</sup>

Therefore, in a highly commissarist military, most of the predictions regarding the performance of military commanders--such as problems with initiative, improvisation, use of maneuver, and integration of combined arms teams--should be greatest at the top

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<sup>33</sup> Manfred Halpern, "The Army," in Abdulla M Lutfiyya and Charles W. Churchill eds., *Readings in Arab Middle Eastern Societies and Cultures*, (The Hague: Mouton, 1970), pp. 431-432.

<sup>34</sup> Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," p. 258. See also his discussion of politicization of the Roman army and its impact on senior versus junior levels of command on pp. 257-258.

<sup>35</sup> William F. Hickman, *Ravaged and Reborn: The Iranian Army, 1982*, (Washington, DC: The Brookings Institute, 1982), pp. 4-5.

<sup>36</sup> Edgar O'Ballance, *The Gulf War*, (London: Brassey's, 1988), p. 15.

<sup>37</sup> O'Ballance, p. 47.

<sup>38</sup> O'Ballance, pp. 81-82. The nature of this depoliticization was for the political leadership to cease attempting to micromanage the conduct of battles from Tehran and to give command of the operations to the most competent officers, rather than those most devoted to the revolution, as had previously been the case immediately after the revolution.

of the hierarchy, rather than at the bottom, and should be most manifest in strategic, rather than tactical, decision-making. Of course, this is not to say that commissarism has no impact on lower levels of command. There are some effects of commissarism that affect lower levels more than higher ones, such as poor morale, which is likely to be most problematic among the enlisted ranks and junior officers than among the high command. Politicization pervades the entire military, but its impact is much greater at the top of the chain of command than at lower levels.

This tendency is the clearest difference between the theory of politicization of the military and that of the cultural origins of Arab military ineffectiveness. Politicization tends to have the greatest impact at higher levels of command with diminishing influence at lower levels. It predicts poor generalship and inept strategic leadership and decision-making. Conversely, culture tends to have its greatest influence at lower levels of command with diminishing influence at higher levels. It predicts inept leadership and decision-making among the captains, majors, colonels and even brigadier generals that command the tactical units of Arab militaries.

### **Praetorianism**

Theoretical discussions of military involvement in the running of the government, what I refer to as praetorianism, have been well developed over the last 30 years.<sup>39</sup> The most extreme form of this involvement is a *coup d'etat* that results in a military dictatorship. However, the military need not actually take over the running of the government. The military may intervene only to overturn the current regime and then willingly step aside to allow another civilian government to take power. At an even less obvious level, the military can simply threaten such actions to influence government policy.

The military's motives for intervening may be similarly wide-ranging: the military leadership may disagree with the foreign or domestic policies of the regime, they may dislike government policies toward the armed forces, they may be reacting to government efforts to ensure the loyalty of the military by packing the officer corps--what I call commissarism--or they might seek power for simple reasons of greed and ambition. Ultimately, however, the causes of military intervention in domestic politics are largely irrelevant to this study, because the impact on military effectiveness is more or less the same in every case.

### **Praetorianism in the Middle East**

During the first half of the period of time I consider, praetorianism was probably the dominant form of politicization of the military in the Arab world. Military takeovers were so common to the region that many Arabs, as well as many Western social

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<sup>39</sup> For a sample of the voluminous literature on military intervention in government, see Martin Edmonds, *Armed Services and Society*, (Boulder, CO: Westview, 1990); Samuel E. Finer, *The Man on Horseback: The Role of the Military in Politics*, (London: Pall Mall Press, 1962); Huntington, *Political Order in Changing Societies*, op. cit; Amos Perlmutter, "The Praetorian State and the Praetorian Army," *Comparative Politics*, April 1969, 385; Amos Perlmutter and Valerie Plave Bennett, *The Political Influence of the Military: A Comparative Reader*, (New Haven, CT: Yale University Press, 1980). For this phenomenon as it specifically applies to the Middle East, see for example, Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970); Sidney Fisher, *The Military in the Middle East: Problems in Society and Government*, (Columbus, OH: Ohio State University Press, 1963); Majid Khadduri, "The Role of the Military in Middle Eastern Politics," *American Political Science Review*, No. 47, 1953, pp. 511-524; and Roger Owen, "The Role of the Army in Middle Eastern Politics--A Critique of Existing Analyses," *Review of Middle East Studies*, No. 3, 1978, pp. 63-81.

scientists, considered military rule to be "the natural course" in the area.<sup>40</sup> Eliezer Be'eri counted 30 military coups, successful and failed, in the six Arab states of Egypt, Iraq, Jordan, Syria, Sudan, and Yemen between 1949 and 1966 alone.<sup>41</sup> In 1952, the Free Officers overthrew the Egyptian monarchy and established a nominal republic, in reality a military junta that eventually gave way to the dictatorship of Gamal 'Abd al-Nasser. In 1958, Iraqi military officers overthrew King Faysal II, ushering in a period of seemingly constant military coups and countercoups as various groups and personalities within the armed forces vied for power. Between 1958 and the final Baathist coup in 1969, depending on your criteria, there were as many as 19 coup attempts in Iraq.<sup>42</sup> Similarly between 1949 and Assad's takeover in 1970 there were as many as 15 different coup attempts in Syria.<sup>43</sup> In 1969, a clique of military officers led by (then Captain) Muammar Qadhafi overthrew King Idris of Libya.<sup>44</sup> In 1962, a combination of factions essentially led by the Army Chief of Staff, General Sallal, overthrew the Imamate of northern Yemen.<sup>45</sup> Although the Jordanian and Saudi monarchies reigned throughout this entire period, both did so by surviving a number of unsuccessful military coups.<sup>46</sup> Indeed, virtually every Arab country has experienced several successful and/or unsuccessful military coup attempts since the Second World War.

Consequently, the primary manifestation of politicization of Arab militaries prior to 1970 was the almost constant interference in governance by the military. During this time, commissarism, to the extent that it existed, was largely a product of this ubiquitous praetorianism as military dictators attempted to prevent their subordinates from ousting them as they had ousted their predecessors. However, since about 1970, praetorianism has clearly declined in its importance as a force affecting Arab military affairs. For the most part, this decline has been the product of a dramatic improvement in the commissarist methods of Arab despots. In effect, the dictators who took power between 1967 and 1973 proved so successful in packing the officer corps, micromanaging training and operations, and otherwise distorting the military hierarchy that they effectively neutralized the military as a political force.

The clearest sign of this change has been the marked drop in the frequency of successful coups since the early 1970s. Sadat was assassinated, not overthrown. Lebanon's collapse had nothing to do with military intervention in domestic politics, indeed, the military was coaxed into assuming a greater role in governance as a last ditch measure to prevent civil disintegration. Saddam Husayn, Muammar Qadhafi, and Hafiz al-Asad have brought their personal versions of totalitarian stability to politics in Iraq, Libya, and Syria. Although the military has overthrown governments elsewhere in North Africa, in the countries of the fertile crescent and the Persian Gulf, there has not been a successful military coup since the early 1970s. This is not because there haven't been any

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<sup>40</sup> Be'eri, p. 4.

<sup>41</sup> Be'eri, pp. 246-250.

<sup>42</sup> On Iraqi military involvement in politics during this period see Kanaan Makiya (writing as Samir Al-Khalil), *Republic of Fear: The Politics of Modern Iraq*, (Berkeley, CA: University of California Press, 1989), pp.21-27; Phebe Marr, *The Modern History of Iraq*, (Boulder, CO: Westview, 1985), pp. 153-210; and Peter Sluggett and Marion Farouk Sluggett, *Iraq Since 1958*.

<sup>43</sup> Derek Hopwood, *Syria, 1945-1986: Politics and Society*, (London: Unwin Hyman, 1988), pp. 32-53.

<sup>44</sup> On the Libyan coup, a good overview can be found in Jonathan Bearman, *Qadhafi's Libya*, (London: Zed Books, 1986), pp. 52-66; Helen Chapin Metz, *Libya: A Country Study*, (Washington, DC: Government Printing Office, 1987), pp. 42-44; and John Wright, *Libya: A Modern History*, (Baltimore: Johns Hopkins University Press, 1982), pp. 119-130.

<sup>45</sup> Be'eri, pp. 223-228.

<sup>46</sup> On coup attempts against the Jordanian monarchy, see for example Be'eri, pp. 230-245; and James Lunt, *Hussein of Jordan*, (London: McMillan, 1989), pp. 30-50. On coup attempts against the Saudi monarchy, see Peter W. Wilson and Douglas F. Graham, *Saudi Arabia: The Coming Storm*, (Armonk, NY: M.E. Sharpe, 1994), pp. 145-147.

coup *attempts* during this time, but because most of the Arab regimes have taken great pains to ensure the loyalty of their armed forces (commissarism) and thus have been able to foil plots before they can be brought to fruition.

Moreover, while it is true that many current Arab dictators such as Hafiz al-Asad, Muammar Qaddafi, Hosni Mubarak, and even Saddam Husayn to a certain extent, were able to take power because of their status within (with, in Saddam's case) the military, their regimes can no longer be considered true military dictatorships.<sup>47</sup> In each of these cases, the dictator has been able to greatly diminish his reliance on the military to keep himself in power. Arab despots have been able to accomplish this by creating independent entities responsible for internal security and the protection of the regime; by reorienting the armed forces to deal primarily with external threats; by caging the military with omnipresent, mutually-reinforcing security services; and with wholesale changes in the officer corps to ensure that all key military leaders have a personal tie to the despot. As a result, the regime expects to rely on the military to defend it against internal threats only in extreme circumstances. Indeed, in virtually every one of these regimes, the military is looked on more as a threat to the regime than a support to it--a clear sign of the withering of praetorianism and the ascendancy of commissarism.

Consequently, it is no longer really appropriate to consider these regimes praetorian military dictatorships because the *institutional* role of the military in shaping government policy on other than strict national security issues has been dramatically reduced. Virtually all of the Middle East regimes have been able to create power bases independent of the military, frequently based on their pervasive and brutal security services, and have consciously limited the ability of the military to affect policy either by exerting pressure on the regime or actually overthrowing it. Of course, key military officers still play an important role in many of the Arab regimes, but in most cases it is because of their personal ties to the dictator not because of their institutional position within the military. For example, in Syria, Asad's higher commanders such as Mustafah Tlas, 'Ali Duba, Muhammad al-Khuli, 'Ali Aslan and Rif'at al-Asad--members of Asad's inner circle, referred to as "the Great 10"--influence policy because of their personal ties to Asad, not because they have an independent power base in the military which Asad feels compelled to respect.<sup>48</sup> Similarly, few, if any, Iraqi military officers exert any influence on Saddam Husayn's policies, and those that have done so--such as the late 'Adnan Khayrallah, Husayn Kamil, and perhaps 'Ali Hasan al-Majid--did because of their personal ties to Saddam.<sup>49</sup> The same can be found in the Saudi monarchy, where Riyadh's military commanders have a say in government policy because they are high-ranking princes, not because of their military positions.

Almost across the board, the only reason these individuals have the key military command positions they do is because of their pre-existing ties to the despot. In some cases they were not even military officers at all before being given high rank and an important posting in the army. Hence they brought their political influence with them to the armed forces, rather than gaining it from their position in the military. Moreover, it has generally been the case that whenever the regime begins to suspect that one of its cronies in the high command is actually beginning to acquire an independent base of power in the military which he might be able to wield against the regime, he is quickly

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<sup>47</sup> Samuel Finer, "The Morphology of Military Regimes," in Kolkowicz and Korbonski eds., p. 286. In this work, Finer argued that, "whether a civilian or a military man occupies the chief executive post is not itself material to the question as to whether the military, as such, rule or not."

<sup>48</sup> Lamis Anderson, "Assad Nudges Syria Closer to Peace Deal with Israel," *The Christian Science Monitor*, August 30, 1994, p. 2.

<sup>49</sup> Efraim Karsh and Inari Rautsi, *Saddam Hussein a Political Biography*, (NY: The Free Press, 1991), pp. 125, 169, 180.

removed.<sup>50</sup> Therefore, since about 1970, praetorianism has not been a major influence on Arab military effectiveness.

### **The Effects of Praetorianism on Military Effectiveness**

Praetorianism, like commissarism, can have a considerable impact on military effectiveness, but unlike commissarism, it tends to exert its influence in only a small number of areas of military operations.<sup>51</sup> Essentially, praetorianism affects military performance in two ways. First, praetorianism breeds tremendous distrust and suspicion within the military. Those who plotted and executed the coup will be resented by those who were excluded from the plot, and those excluded probably were left out because the plotters did not trust them to begin with. Members of the military will now be responsible for making decisions on highly contentious political issues, such as the raising and allocation of revenues, that almost invariably create severe divisions within the leadership as to the best course of action, and thus breed factionalism within the military hierarchy. This factionalism and dissension can severely impair cohesiveness within, and coordination among, units or services. In extreme cases, it can lead to troops questioning or disobeying orders, or officers executing operations in combat with an eye to political ramifications rather than military objectives. Moreover, military officers lower in the chain of command may aspire to political power and may well employ Machiavellian methods in pursuit of this goal, all to the detriment of trust among the officer corps generally.

The second general problem created for military effectiveness by praetorianism is that it distracts military officers from the practice of purely military skills. At the highest levels, the dictator and his top aides are likely to have a full plate just dealing with the constant demands of running the government. Managing the governmental bureaucracy and making political decisions is a full-time job, and even the most energetic generals are bound to fall short of adequately addressing the demands of governance while simultaneously attending to the needs of the military by formulating strategies, directing planning (or combat operations), allocating resources, and monitoring the training of the forces. Inevitably, the military tasks are crowded out by the political demands. In a similar fashion, junior officers tend to put less time and effort into the training of their units and the honing of their military skills. In some cases, this is because junior officers are interested primarily in political power and what is required to achieve it is rarely what contributes to military effectiveness. Alternatively, many junior officers will pay little attention to their professional tasks because of the absence of direction and attention from the top levels of the hierarchy. Without the continuous guidance of the senior leadership, many lower officers will see little reason to make the effort.

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<sup>50</sup> On the replacement of praetorianism by commissarism in Egypt, see Richard Dekmejian, "Egypt and Turkey: The Military in the Background," in Kolkowicz and Korbonski eds., pp. 35-40; Finer, "The Morphology of Military Regimes," p. 286; Hopwood, *Egypt*, pp. 106; Owen, p. 71; and Vatikiotis, *The History of Modern Egypt*, pp. 419-420. On Iraq, see Finer, "The Morphology of Military Regimes," p. 293; Kanaan Makiya (Writing as Samir Al-Khalil), *Republic of Fear: The Politics of Modern Iraq*, (Berkeley: University of California Press, 1989), pp. 21-28; Marr, *The Modern History of Iraq*, pp. 228-231. On Syria, see Drysdale, pp. 69-70; Finer, "The Morphology of Military Regimes," p. 293; and Hopwood, *Syria*, pp. 35-36, 52, 96. On Jordan, see Be'eri, p. 230; and Finer, "The Morphology of Military Regimes," p. 282.

<sup>51</sup> On the impact of praetorianism on military performance, see Stanislav Andreski, "On the Peaceful Disposition of Military Dictatorships," *Journal of Strategic Studies*, Vol. 3, No. 3, Dec. 1980, pp. 3-10; Huntington, *The Soldier and the State*, Op. cit.; Janowitz, *The Professional Soldier*, Op. cit.; and Rapoport, "The Praetorian Army," Op. cit. As mentioned above, Rapoport primarily concentrates on the impact of commissarism--although he calls it praetorianism--but some of his points are specifically related to what I consider praetorianism. Similarly, as part of his general point that politicization impairs military capabilities, Andreski argues that military dictatorships breed factionalism and corruption within the military.

These two effects of praetorianism generate specific predictions regarding the likely performance of Arab militaries in combat to the extent that they are affected by praetorianism. Not surprisingly, many of the predictions made by praetorianism are identical to those made by commissarism, although in some cases, the sources of the phenomena are somewhat different.

#### *Poor and Infrequent Training*

As described above, when the military takes over the functioning of the government, or even when it is simply scheming to do so, its priorities shift from purely military concerns of how to fight and win wars, to questions of domestic politics such as how to raise and spend revenues and how to allocate public resources. This distraction tends to crowd out real military preparations such as planning, training, and exercising. Overall, we should expect to find that *the training of Arab units is lackadaisical, infrequent, and perfunctory*. Arab units should spend little time in training or exercises. When they do train, it should be half-hearted and easy. At best, they should appear to be going through the motions, rather than making a determined effort to learn military skills. One important caveat to this prediction is that Arab training should suffer not because the officers are inept and don't know how to train their troops so much as they just don't care about training their troops. Consequently, inadequate training should be more prevalent than poor training.

#### *Combined Arms*

Praetorianism generates the same two problems for effective combined arms cooperation as commissarism. Praetorianism provides little incentive for adequate training--which is absolutely critical to effective combined arms operations--and creates endemic mistrust and rivalries among individuals, units or even entire services. For these reasons, the theory predicts that *Arab militaries should experience significant problems with combined arms operations*. By the same token, as with commissarism, in those instances when the military high command makes a determined effort to force its subordinates to learn the skills associated with combined arms operations they should be able to develop reasonably good skills in this area. If the regime demands effective combined arms coordination, and imposes severe penalties for failure, then the inattention to training and even problems with mistrust and rivalries are likely to be solved fairly easily.

#### *Morale*

Perhaps the most important consequence of praetorianism for military effectiveness is its devastating effect on morale. The mistrust and suspicion bred by praetorian involvement in the government, the sense that the military leadership is more concerned with domestic political issues than military preparedness, the disincentives that this may create for training, and possibly even the sentiment among officers and enlisted that military intervention in domestic politics is morally wrong, all conspire to undermine military morale. Consequently, we should expect to find that *Arab militaries suffer from consistently poor morale*. As with commissarism, these problems are likely to be most clearly discernible at the start of a war, before the fortunes of battle have had their influence on morale.

### *Unit Cohesion*

As with commissarism, praetorianism also predicts that Arab militaries should suffer from poor unit cohesion. The mistrust and suspicion that are a hallmark of praetorian militaries are extremely destructive of unit cohesion. Praetorianism frequently breeds tension between officers and enlisted personnel as the officers become increasingly preoccupied with political considerations and neglect their troops. Another facet of praetorianism that erodes unit cohesion is the rivalry and jockeying for political position that normally accompany this variant of politicization. In particular, praetorianism can completely subvert the military chain of command as lower officers establish ties with senior officers based on political affiliations and then use these ties to suborn the authority of their superiors. Consequently, the pattern of unit disintegration the theory predicts is for officers to desert their troops in battle, causing the unit to fall apart.

### *Information Flows*

Another clear prediction of praetorianism is that *Arab armies should suffer from extremely poor management and exchanges of information* both vertically and horizontally within the chain of command. Mistrust, suspicion, secrecy, and factionalism should lead to the constant distortion, fabrication, and concealment of information. These information problems should be subtly different from those predicted by the commissarist variant. Commissarism predicts deceit and obfuscation primarily because of the fear of retribution from the regime. Praetorianism, on the other hand, predicts the same behavior, but primarily because of problems with peers: political maneuvering, rivalries and mistrust. Thus, in commissarist systems the problem is a vertical one along the chain of command and should worsen as one gets higher in the organization. Subordinates should consistently deceive their superiors regarding failures, and this deceit should get worse at the top of the hierarchy where the failures are likely to be greater and the penalties correspondingly harsher. On the other hand, in praetorian systems, the problems arise from the conflicting loyalties within the organization. Thus information is likely to be transmitted accurately among officers loyal to one another (within "cliques") whether they are linked horizontally or vertically in the chain of command, but should be distorted when it must pass from officers who fear, distrust, or are rivals (from one clique to another), again regardless of whether this is a vertical or horizontal link within the hierarchy. In other words, in some areas, information transmission might be fine, and in other areas it might be completely distorted or non-existent. Thus, information flows in praetorian systems should be uneven, compartmented, and disconnected.

### *Inter- and Intra-service Coordination*

The factionalism and rivalries inherent in praetorianism also inflict substantial damage on cooperation both among and within the different armed services. Officers may consciously try to undermine their rivals in command of other units by failing to support them in the midst of combat or otherwise allowing them to fail in their mission. Other officers may simply not trust their rivals to come to their aid in a tight spot and so may be tentative in their actions. Still others may fear that they are not in possession of all relevant information and therefore may be getting themselves into a trap by trusting another service or another unit to cover their vulnerabilities. All of these obstacles can make coordination among different units or different armed services difficult in praetorian militaries.

In addition, there is a tendency in highly praetorian militaries for high ranking officers to try to carve out "baronies" or "fiefdoms" within the military which effectively can serve as power bases from which to secure political authority. To create such baronies, the senior officers must effectively isolate their commands from the rest of the military, and then to exercise power they must use the forces under their control in



manners that do *not* accord with the overall plan. To demonstrate that he has power because he controls a particular military "fiefdom" a senior officer must either withhold its participation in an operation (either partially or fully) or undertake his own operation, one that differs from the operations of the rest of the military. Only in this way can a senior officer demonstrate to the military high command that he has power independent of them and his wishes must be fulfilled if they are to get the participation of his forces. This is reminiscent of how Hafiz al-Asad came to power in Syria. Asad turned the Syrian Air Force into his personal demesne, and during the 1970 Syrian invasion of Jordan, which he opposed, Asad refused to commit the Air Force in support of the armored units fighting the Jordanians. As a result, the Syrian ground forces were mauled by the Jordanian Air Force, and the humiliation of the repulse of the invasion allowed Asad to oust Salah Jadid.<sup>52</sup>

### **Additional Predictions of the Praetorian Theory: The Big Picture**

The crucial prediction of the Praetorian variant of politicization of Arab militaries is that Arab military effectiveness should fluctuate with the vicissitudes of praetorianism in the Middle East. Praetorianism was a major feature of the Middle East landscape during the first decade or two of the postwar period. Therafter, it largely died out as a result of highly successful commissarist policies. Nevertheless, it has not been completely eradicated, and in some Middle East states the military often wields considerable power independent of the regime. For each Arab state, as praetorianism rose after the 1948 War of Israeli Independence (or in a few cases, even before) military effectiveness should have declined. Similarly, in the late 1960s and early 1970s, as commissarism won out over praetorianism, military effectiveness should correspondingly improve. To the extent that praetorianism lingers on in some states, its effects should continue to be felt in combat.

Of course, it may be that the seamless transition from praetorian-dominance to commissarist-dominance allowed for no improvement in military effectiveness. That is, before about 1970, praetorianism might have impeded Arab military effectiveness only to be replaced by commissarism and thus allowing for no improvement in military effectiveness. However, differences in the specific categories of performance should be apparent. That is, there are some predictions of the two theories that differ. If it is the case that praetorianism gives way to commissarism in such a fashion as to allow for no general improvement in military effectiveness, it should still be the case that the areas of combat performance that cause the Arabs problems should change. For example, it should be the case that during the height of praetorianism Arab armies were hindered by the distraction of the military leadership with domestic political issues, by poor morale and poor unit cohesion, by an inattention to military training, and by infighting and factionalism among the officers. Then, when commissarism succeeded praetorianism, it should be the case that Arab armies were hindered by inept generalship, by poor morale and unit cohesion, by a pervasive fear which dampened initiative and innovation among senior field commanders, by an unwillingness of subordinates to report mistakes to higher authorities, and by excessive officer rotations and bizarre command arrangements.

Finally, if the problem afflicting Arab militaries is the general phenomenon of praetorianism, and not the unique features of Arab society, then it should be the case that all armed forces that suffer from praetorianism should perform as poorly in combat as the Arabs have since 1945. In other words, non-Arab armed forces that are similarly plagued by praetorianism should do as badly in battle as the Arabs. Moreover, they should not

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<sup>52</sup>On the Syrian invasion of Jordan see Anthony Cordesman, *Jordanian Arms and the Middle East Balance*, (Washington, DC: Middle East Institute, 1983), pp. 38-39; Arthur Day, *East Bank/West Bank*, (NY: Council on Foreign Relations, 1986), p. 77; Brig. Syed Ali El Edroos, *The Hashemite Arab Army, 1908-1979*, (Amman, Jordan: The Publishing Committee, 1980), pp. 452-459; and Lunt, pp. 136-148.

simply do as poorly in a broad sense, but should experience their most debilitating problems in the same areas as the Arabs.

### **The Palace Guard Theory**

The third variant of politicization of the military affecting Arab armed forces is the palace guard theory.<sup>53</sup> Palace Guards are military forces charged with protecting the person of the ruler and preventing the overthrow of the regime by other elements from within the society. A military force that is designated a palace guard is really not expected to conduct military operations against the armed forces of a foreign power. Stemming from this definition, the palace-guard theory asserts that Arab militaries have performed poorly in combat since 1945 because they are all essentially palace guards that were never meant to fight other organized armed forces, and therefore it is not surprising that they haven't fared well in combat. As one scholar phrased it, Arab militaries "are not expected to engage in full-scale warfare and are therefore not trained to improvise, innovate, etc. When they get into 'real' wars--for example, Iraq-Iran or even [the Six-Day War]--it is by mistake and with predictably dismal consequences."<sup>54</sup>

The palace guard theory does not claim that the only function that Arab militaries serve is literally guarding the physical person of the leader and his residence, but that they serve the same essential purpose. Specifically, it contends that virtually the only mission of the armed forces is the defense of the regime against internal threats. If this is not the only mission of the military, then it is the primary mission and all other missions are distant seconds. Of greatest importance, the theory argues that other missions are of such minor importance that the military spends little or no time preparing to conduct them, and it is this lack of preparation that results in the consistently poor showing of Arab armies and air forces in combat since 1945. In other words, the theory maintains that the problem is that Arab soldiers and officers are not trained to fight properly, that it is the absence of such training that leads to poor performance in combat, and that if the Arabs ever did bother to train their armies to fight "real" wars, they would do fine, or at least no worse than other comparable militaries.

### **Palace Guardism in the Middle East**

"Palace guardism" was originally a dominant feature of the Middle East military landscape during the postwar period, but by the 1970s, it had virtually disappeared among most of the key Arab countries. Most of the modern armed forces of the Middle East were created by the European powers during the late 19th and early 20th centuries. Although some were created initially to help the imperial forces defend the colony (or Mandatory state) against an external threat, most quickly settled into the role of palace guard, turning their attention wholly to internal threats to the regime. For instance, the British created the Iraqi army shortly after World War I to help British regulars guard against a threatened Turkish invasion, but this threat quickly abated and the Army turned its attention almost wholly to internal security issues, leaving external security to the British.<sup>55</sup> In Libya, Syria and Egypt as well, the armed forces initially were entirely occupied with internal security duties.

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<sup>53</sup> At present, I am using the "palace guard theory" and "palace guardism" to describe this theory. However, if any reader can suggest a better term (one more along the lines of "commissarism" and "praetorianism") to describe this theory, I would appreciate all suggestions.

<sup>54</sup> Lisa Anderson, correspondence with the author, April 25, 1994.

<sup>55</sup> Owen, p. 74; Nadav Safran, *From War to War*, (NY: Pegasus Books, 1969), p. 235.

At some point, however, most of the Arab armed forces shed their palace guard roles and adopted conventional warfare against external adversaries as their primary mission. In many cases, the original internal security role of the military became a tertiary mission. Perhaps the best example of this phenomenon was the Egyptian military, which between 1952 and 1967 underwent a dramatic metamorphosis in terms of its role in the state. Prior to 1952, the Egyptian military had functioned almost exclusively as a true palace guard, responsible for protecting the king and his retainers and having no other real responsibilities.<sup>56</sup> Moreover, as the palace guard theory would predict, when this army was committed to battle against the Israelis in 1948 it was ignominiously defeated. But this defeat prompted the cabal of the Free Officers to overthrow the monarchy, and one of their primary motives was to rebuild the army as a real fighting force to avenge the "disaster" of 1948 which they believed was only possible if the king were gone.<sup>57</sup> Beginning in the mid-1950s the army was gradually relieved of its internal security duties and slowly and haltingly retrained to wage conventional warfare against foreign opponents. This trend reached its appogee between 1967 and 1973 when the last vestiges of responsibility the armed forces still possessed toward the protection of the regime were removed and the military focused solely on fighting Israel.<sup>58</sup> Similar shifts in the priorities of the military from internal to external threats occurred in Iraq after the 1967 Six-Day war and the 1968 Ba'thist coup, in Syria after the Six-Day war and Assad's 1970 coup, and in Saudi Arabia after the 1971 British withdrawal from the Persian Gulf and the 1979 Iranian Revolution.<sup>59</sup>

Perhaps the most prevalent method by which Middle Eastern states have been able to redirect the attention of their armed forces to external missions has been to create dedicated internal security forces. This formula solves both the problems associated with "palace guardism"--that is, the military does not have to worry about defending the regime from internal threats--as well as those associated with praetorianism, because the regime then has another force that can protect it against military coup attempts. Syria's 569th Armored Division, Republican Guard, and the Defense Companies were all dedicated internal security forces which protected Assad's regime from internal threats--including the Syrian military--and so have allowed Asad to make "real" military operations--such as fighting Israel or expanding Syrian control into Lebanon--the primary mission of the Syrian armed forces.<sup>60</sup> Similarly, in 1955, after an attempted military coup, the Saudis created the Saudi Arabian National Guard to handle the internal security role and protect the royal family from the Army, while after the Six-Day War, Nasser created the Republican Guard (also known as the Presidential Guard) to serve the same function.<sup>61</sup> In Iraq, this role was originally played by the Republican Guard, but during

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<sup>56</sup> Safran, pp. 206-207.

<sup>57</sup> Manfred Halpern, *The Politics of Social Change in the Middle East and North Africa*, (Princeton: Princeton University Press, 1963), pp. 256-257; Safran, p. 208.

<sup>58</sup> Michael Barnett, *Confronting the Costs of War: Military Power, State, and Society in Egypt and Israel*, (Princeton: Princeton University Press, 1992), pp. 101-130; Dekmejian, pp. 34-40; Owen, p. 71; Safran, pp. 208-214.

<sup>59</sup> On Iraq, see Owen, p. 77; and Safran, *From War to War*, pp. 235-238. On Syria, see Be'eri, p. 155; Drysdale, pp. 69-70; and Owen, p. 77. On Saudi Arabia, Nadav Safran, *Saudi Arabia: The Ceaseless Quest for Security*, (Ithaca: Cornell University Press, 1985), p. 431; and Wilson and Graham, pp. 146-147.

<sup>60</sup> Eisenstadt, *Arming for Peace?*, pp. 57-61; Drysdale, p. 70; Owen, p. 70. Drysdale notes that with regard to the Defense Companies, "In effect, this palace guard has both reduced the internal policing role of the armed forces proper and removed some temptation to intervene." Drysdale, p. 70. Also see Be'eri, p. 155. Be'eri notes that in July 1963, shortly after coming to power, the original Ba'th regime adopted this same solution by creating the Syrian National Guard.

<sup>61</sup> On the Saudi National Guard, see Wilson and Graham, p. 146. On the Egyptian Republican Guard, see Dekmejian, p. 36. Sadat and Nasser also greatly built up the forces of the Ministry of the Interior and the

the Iran-Iraq war, Baghdad eventually found it necessary to turn the Guard into a "true" military force that was at least equally concerned with both external and internal security operations. As a result, the regime then split off a small part of the Guard, referred to as the Special Republican Guard, to perform the function formerly entrusted to the Republican Guard.<sup>62</sup>

In other Middle East states, the importance of internal security duties were never the only concern of the military. For example, it is unclear to what extent the Jordanian military ever really fit the palace guard model because the external security mission was always a major concern of Jordan's armed forces and its importance compared to the internal security mission has oscillated throughout this period. The Jordanian military began life as the Arab Legion under British tutelage during the period of the British mandate over Transjordan. Its primary missions were to guard the frontiers of the state against raiding tribes from Iraq and Saudi Arabia and to ensure the internal security of King Abdullah's regime by preventing rebellions, inter-tribal conflict, and infiltration both to and from strife-ridden Palestine. Most of the activity of the Legion focused on guarding the borders against Saudi and Iraqi forces, and not surprisingly, this was the main focus of Legion training. In the late 1930s and the 1940s, as the threats abated from Iraq and Saudi Arabia, the Legion spent more of its time maintaining domestic harmony and attempting to control the borders with Palestine, but the Legion's training, still run by the British, continued to emphasize external defense. This tendency was reinforced by the pro-German coup in Iraq and Rommel's threat to Egypt in 1941 and 1942. The British increasingly prepared the Legion to take part in the defense of Britain's Middle East empire, and the Legion participated in the successful campaign to retake Iraq and overthrow the Rashid 'Ali government. Immediately after the end of the Second World War, the Legion found itself fighting Israeli forces for control of the West Bank territories which King Abdullah unilaterally annexed after the proclamation of the state of Israel. After 1948, the constant skirmishing with Israel prompted the Legion to continue to stress the territorial defense of the Hashemite Kingdom as its primary task. Invasions by Israel in 1967 and Syria in 1970 (as well as other threatened invasions by Syria, Israel, and Iraq) have forced the Jordanian military to continue to stress its external security mission right up to the present, even though the Army has probably dealt more with internal matters than external threats since the early 1970s.<sup>63</sup> Thus, even though internal security was always an important concern of the Jordanian armed forces, external security has also been a primary mission and although which role took precedence has varied over time, the Jordanian military never neglected its preparations to fight foreign threats--the key criterion of the palace guard theory.

As this discussion suggests, the applicability of the palace guard theory to the Arab states since World War II is probably quite limited. Like praetorianism, armed forces relegated solely to palace guard functions (i.e. internal security missions) effectively disappeared by the second half of the postwar period. However, also like

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Police to play the twin roles of internal security force and protector of the regime against the military. Dekmejian, p. 38.

<sup>62</sup> Michael Eisenstadt, *Like a Phoenix from the Ashes? The Future of Iraqi Military Power*, Washington Institute Policy Paper No. 36, (Washington, DC: Washington Institute for Near East Policy, 1993), pp. 10-11; Efraim Karsh and Inari Rautsi, *Saddam Hussein: A Political Biography*, (NY: The Free Press, 1991), pp. 189-190.

<sup>63</sup> On the history of the Jordanian military, see Cordesman, *Jordanian Arms*, op. cit; El Edroos, *The Hashemite Arab Army, 1908-1979*, op. cit; John Bagot Glubb, *The Story of the Arab Legion*, (London:1948); John Bagot Glubb, *A Soldier with the Arabs*, (London: 1957); Lunt, *Hussein of Jordan*, op. cit; Samir Mutawi, *Jordan in the 1967 War*, (Cambridge: Cambridge University Press, 1987); Brig. Peter Young, *The Israeli Campaign, 1967*, (London: Kimber, 1967). Young was a British officer seconded to the Arab Legion who eventually rose to become the commander of the 9th Regiment manning the defenses of Jerusalem before the eviction of the British in 1956.

praetorianism, vestiges of their former role as palace guards lingers on in most Arab armies. Virtually all of the Arab militaries can be--and occasionally are--called on to perform internal security functions by the regime. Although internal security is generally no longer their primary concern and they now train almost exclusively for the external security mission, Arab armed forces are still responsible to a greater or lesser extent for defending the regime against certain kinds of internal threats.

### **The Impact of Palace Guardism on Military Effectiveness**

Without doubt, militaries plagued by "palace guardism" suffer heavily in combat operations. Armed forces that have been created solely for the purpose of guarding the regime against internal threats should not be expected to fare well when asked to fight other organized militaries.

#### *Training Geared Toward Internal Security Duties*

The central problem with palace guard militaries is that they have not been trained to conduct conventional military operations. Modern combat is no place for amateurs. Even as late as the early days of the First World War, the vast bulk of armies were composed of infantry whose primary skill was using a rifle either as a firearm, a pike (that is, with the bayonet), or a club. Cavalry and artillerymen required special training, but they comprised only a small percentage of any army. Consequently, those skills learned in internal security duties--marksmanship, military discipline, and a willingness to kill other people--fit in well with the wartime requirements of the army. In short, it did not take much training to turn a man into a decent soldier, and training for internal security duties often paralleled the training required for conventional operations against another army.

All this ended with the two world wars. The mechanization of armies; the development of air forces; as well as the tremendous advances in communications, engineering, and intelligence gathering equipment, revolutionized warfare. In particular, it created dozens of entirely new categories of specialized military personnel trained in skills unique to the military. Moreover, the new speed at which armies could move, the space over which they maneuvered, and their need to coordinate the actions of dozens of different types of units, geographically dispersed, moving quickly, and operating in three dimensions, meant that soldiers not only had to learn their own special skill, but had to understand enough about the skills of the other specialists to be able to integrate their operations into those of the rest of the force. Indeed, the great strength of modern militaries lies in the synergy of these different types of operations and an army that can effectively integrate its various elements has a tremendous advantage over one that cannot.

This revolution in warfare entailed a dramatic increase in the amount of specialized training and practice required to build an effective military, one capable of engaging and defeating other modern militaries. Specifically, it meant that training for internal security operations was entirely inadequate for conventional military missions. Operations against even the most sophisticated and well-armed internal security force requires few of the skills needed for successful conventional military operations on the modern battlefield. Even though internal security forces frequently possess the trappings of conventional militaries in terms of having tanks, artillery, and even aircraft, because their opponents generally do not (or if they do they are in miniscule quantities) there is no need for them to have to integrate them into a synergistic team or to exploit the full capabilities of that equipment in terms of its mobility and lethality. Thus the training provided internal security forces typically is hopelessly inadequate for conventional military operations. Thus, *to the extent that Arab militaries are palace guards trained for internal security duties only, they should fare poorly in combat with other militaries.*

For purposes of this study, I do not consider large insurgencies to be "internal" threats. While insurgencies clearly are "internal" in the sense that they consist of citizens

of the country and operate within the same country, their size and organization make them qualitatively different from other threats and more like conventional military opponents than domestic unrest. The reason that palace-guardism is pernicious to military effectiveness is because it means that the country's armed forces are not training for organized, large-scale military operations. Essentially, a bunch of well-armed thugs can disperse a crowd and cow a populace into submission, but it requires a trained, organized army to conduct counter-insurgency operations. Thus counterinsurgency operations are much closer to conventional military operations than they are to riot-control and more mundane internal security responsibilities. Counterinsurgency operations also involve some skills that are directly transferrable to conventional operations, such as reconnaissance, small-unit tactics, and clearing operations. Hence, training for counterinsurgency operations is not nearly as pernicious for military effectiveness as training only for true internal security operations.

#### *Poor and Infrequent Training*

Militaries charged only with keeping the peace and defending the regime against internal threats often get lazy. Because it generally doesn't take much skill or effort to keep the civilian populace in line or to defeat a coup, palace guard militaries usually see little reason to overexert themselves training. Consequently, many palace guard militaries badly neglect training altogether--whether it is directed toward internal security operations or conventional operations against a foreign army. Therefore, we should expect to find that *the training of Arab units is lackadaisical, infrequent, and perfunctory*. However, since there are some palace guard militaries that do not manifest this problem, failing to conform to this pattern of behavior should not necessarily disqualify palace guardism as an explanation of Arab military effectiveness.

#### *Problems Arising from the Lack of Training in Conventional Military Operations*

The lack of the right training is the crucial prediction of the palace guard theory, but more specific predictions regarding military effectiveness can be inferred from this broad hypothesis. Many categories of military performance at the tactical level hinge on proper training in specialized skills. Combined arms operations require the proper integration of the whole range of military specialities, which in turn requires good training and constant practice for success. Maneuvering mechanized ground forces on the battlefield requires a thorough understanding of how armored forces move and fight, and the ability to take advantage of both the mobility and combat capabilities of those forces. While palace guard forces may or may not be accustomed to improvising, their limited understanding of their equipment and how to employ it against another army is likely to make it difficult for them to quickly reorient their forces to conduct an ad hoc operation, one drawn up in the heat of battle. Even set-piece military operations are likely to prove difficult for palace guards because their senior leadership is unlikely to understand how to put together a sizeable military operation against another military, and their subordinates are unlikely to be able to exploit their equipment to the extent necessary to actually defeat a comparably-equipped adversary. Indeed, it is one thing to line up a bunch of artillery pieces to blow up a rebellious village, or to roll tanks through the streets to overawe dissidents, it is quite another to use the same equipment against a well-armed and equally mobile opponent. Good military air operations demand qualified pilots who have practiced dogfighting and strikes against heavily-defended military targets. Clearly, pilots trained only to bomb lightly defended insurgents or to buzz crowds to cause them to disperse are going to have great difficulty shifting to true military missions. Thus the theory predicts that *Arab militaries should prove incapable of conducting combined arms operations, maneuver warfare, flexible artillery or armor operations, ad hoc and set-piece operations, air-to-air combat, and air-to-ground missions*.

### *Leadership*

The single most important criteria for any member of a palace guard is that he must be willing to fight and die to defend the ruler against other members of the society. Similarly, the palace guards, by definition, will be responsible for protecting the key elements of the regime, both in terms of facilities and individuals. This position means that they are the best positioned to overthrow the regime. For these two reasons, unswerving loyalty to the despot has to be the overriding criteria for membership and command in the palace guard. In effect, this may be considered an area in which commissarism and palace guardism overlap or even merge together. Consequently, as is the case with commissarism more generally, loyalty is invariably made the primary factor in deciding who will be promoted, which can result in a general incompetence throughout the officer corps.

There are two important complicating factors regarding this prediction, however. First, palace guard militaries tend to be smaller than militaries designed to fight other militaries. Eliezer Be'eri, in his study of politicization in the Middle East, found that, because secrecy is the key ingredient of a successful coup, and that if secrecy can be achieved it requires very little military force to overthrow a government, most military coups involve no more than two or three battalions of troops, and frequently less.<sup>64</sup> Thus, a palace guard does not require much military force to defeat a coup attempt. Similarly, popular rebellions and most insurgencies, by their nature, are not terribly well-armed, and therefore can be handled by a smaller, better armed force.<sup>65</sup> Second, many palace guards, especially in the Middle East, are manned by personnel with pre-existing bonds of loyalty to the despot. Thus the military will draw heavily on men from a particular area, ethnic group, or religion who see the ruler either as "one of them," or else as their protector against some other rival area, ethnic group, or religion within the country.

The effect of these two tendencies is to diminish the likelihood of incompetence within a palace guard military. Because palace guard militaries are normally fairly small there are fewer officer slots, and so it is more likely that the regime will be able to find suitable candidates to fill those slots who are both loyal and competent. This task is further eased by the reliance on certain groups that are fiercely loyal to the despot. As long as the regime recruits from these loyal elements, it can concentrate on promoting qualified personnel from within these groups. Given these competing influences, the theory can only predict that *Arab armies should experience uneven leadership among its officer corps.*

### *Morale*

Palace guard militaries sent into combat against a foreign adversary may also experience problems with morale. In some cases, a palace guard military that is ordered to fight a foreign army may recognize beforehand that it is being thrown into a lethal situation for which it is entirely unprepared and so will suffer from poor morale even before the battle has been joined. Those too naive or deluded to see this ahead of time are likely to discover it very quickly. Palace guard militaries committed to conventional combat are likely to suffer heavy casualties and may be overwhelmed by the terror of

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<sup>64</sup> Be'eri, pp. 254-255.

<sup>65</sup> Obviously, some insurgencies, such as the Chinese, Vietnamese, and Afghan guerillas became so large and received so much external assistance that they were able to muster very significant military capability. In these cases, however, the military is fighting what is basically another army, although not a foreign one. Thus in these cases, the regime's military is no longer really performing the internal security mission, at least as it is defined by the palace guard theory. The palace guard theory defines an internal threat as something that is small and militarily weak, thus it will not require much skill on the part of the military to defeat it. This is why the theory predicts that palace guard militaries will do poorly when fighting external threats, because the adversary's armed forces will have considerably greater military power than the internal threats which the palace guard military is designed to confront.

battle, for which their training and experiences in internal security operations will not have prepared them. These two factors alone are likely to drastically undermine morale. However, if the regime persists in committing them to combat operations, the military is likely to suffer defeat after defeat, further discouraging both officers and men. Consequently, we should expect *Arab militaries to suffer from extremely poor morale*.

### **Additional Predictions of the Palace Guard Theory: The Big Picture**

The primary, overarching prediction of the palace guard variant of the politicization of Arab militaries is that Arab military effectiveness should be very poor at the beginning of the postwar era when palace guardism was at its peak, and should slowly improve thereafter. As noted above, palace guardism was the rule immediately after World War II, and during this period Arab armies ought to be very poor. Moreover, they should have been most hampered in those areas of combat performance most affected by the influence of palace-guardism. In other words, Arab militaries should have suffered in combat because they had never been properly trained or organized to fight another conventional military, but instead had always previously been employed and trained to take on only small, poorly organized and armed internal threats. Palace guardism would predict that later, during the 1960s and 1970s when palace guardism began to fade as the Arab states increasingly focused their militaries on external military missions--especially defeating Israel--Arab military effectiveness ought to improve as well. Ultimately, since some of the Arab states relieved their militaries of internal security responsibilities almost completely at various times, it should be the case that these militaries performed at least adequately in combat on those occasions.

As with commissarsim and praetorianism, if the palace guard variant of the politicization theory is correct, then non-Arab militaries that suffer equally from palace-guardism should perform as poorly as the Arabs. They also should manifest the same patterns of behavior in combat, with the same deficiencies proving the most problematic for these militaries as for the Arab armed forces.

### **Why Not More Predictions from this Theory?**

It is important to recognize that the above hypotheses define the full extent of the impact of "palace guardism" on military behavior. The defining feature of palace guard militaries is that they are tasked almost solely with internal security responsibilities and therefore spend almost no time training for conventional military operations. Unfortunately, because most of the literature on politicization of militaries fails to distinguish among the different variants of the phenomenon, to the extent that social scientists do discuss the impact of politicization on the efficient functioning of the armed forces they tend to ascribe problems created by one variant to one of the others.

Thus, while at first glance one might expect palace guardism to produce overcentralization, a dearth of innovation and initiative, poor intelligence operations, and poor unit cohesion, there is no reason why palace guard militaries should. For example, there is no reason why palace guard militaries should be predisposed not to approach problems creatively and innovatively. The best palace guards would be those that did act creatively to solve internal security problems, and just because a palace guard's training focuses on internal security missions there is no reason why that training cannot encourage aggressive, improvisational behavior. In the abstract, all that matters is protecting the regime, and palace guards should be trained to accomplish that mission any way they can. The confusion arises because historically, many despots have been wary of the loyalty of their palace guards, and in response they imposed commissarist measures on them to ensure their loyalty. It is this commissarism that has historically deadened innovation among many palace guards, and not the internal security mission *per se*. Thus, to the extent that a despot could guarantee the loyalty of the palace guard through other measures, such as relying on devoted ethnic or religious groups, we should expect to find that the pernicious effects of commissarism should decline.



### One Theory or Three?

There is considerable interaction among the three different forms of politicization of the military, making it difficult, but not impossible to sort out combat behavior that is more likely the result of one variant or another. J. C. Hurewitz highlighted the interplay among the three forms when he wrote that, "Each time an army overthrows or tries to overthrow a Middle East monarchy, all the surviving monarchs take a deep breath and a close look at their own armies and tighten screening procedures for officer loyalty."<sup>66</sup> In other words, fear of praetorianism breeds commissarism, even among palace guard militaries that have no other function than to maintain them in power. Some authors have even argued that it is the palace guard origins of most Arab militaries that makes both commissarism and praetorianism endemic to the region even after the armies had relinquished their roles as dedicated palace guards.<sup>67</sup>

Another reason the three variants of politicization are difficult to disentangle is that all three forms were present to varying degrees throughout the postwar period. The original Arab monarchies imposed a wide variety of commissarist measures on their palace guard militaries, although in most cases, these eventually proved to be of little avail. Even during the 1950s and 1960s, the height of praetorianism in the Middle East, civilian governments did try to curb the influence of the military by manipulating promotions and recruitment of officers, and even attempting to micromanage military operations. The various military governments were constantly wary of other factions arising within the armed services and therefore attempted to place "their" people in the key positions of power. Similarly, it has been the constant fear of a military coup--a return to praetorianism--that has prompted the excessive intervention into military affairs by Arab regimes throughout the period of relative governmental stability since 1970.

There is some degree of overlap in the predictions made by the various flavors of politicization regarding military performance, that could also be a source of confusion. (See figure 2a below for a summary of the overlapping predictions of the three variants.) In fact, not only is the predicted military performance identical, but the causes of that behavior are sometimes identical. For example, all three forms of politicization predict poor morale and they all predict that a primary source of this problem will be endemic mistrust and secrecy. They only differ as to the sources of the mistrust and secrecy, thus we must go back three steps to find the differences among the variants. Unfortunately, it is often impossible to find the level of resolution in the historical literature necessary to go back three steps to sort through what the causes of mistrust and secrecy were in any particular Arab military. In many instances, the best we can do is identify that mistrust and secrecy existed and was a primary cause of poor morale, in other cases, it is only possible to establish that the military suffered from poor morale.

Nevertheless, it is not the case that the effects of commissarism, praetorianism, and palace-guardism on Arab military effectiveness are indistinguishable. First, despite the overlap, not all of the variants make all of the same predictions. Second, in some cases there are subtle differences in the predictions, or differing sub-predictions. For example, palace-guardism predicts little use of maneuver because of the inattention to training and other preparations for military operations against a foreign military that is the crux of palace-guardism. By contrast, commissarism predicts little use of maneuver because of the pervasive fear of punishment for overly successful or daring commanders that hangs over commissarist militaries. In these cases, it should be possible to examine

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<sup>66</sup> J. C. Hurewitz, *Middle East Politics: The Military Dimension*, (NY: Praeger, 1969), p. 7.

<sup>67</sup> See for example, Owen, pp. 64-71.

Arab military history to establish whether any problems with maneuver can be attributed to either of these causes.

Another factor that makes it easier to distinguish behavior prompted by one variant over the others is that there were fairly clear periods of time between 1945 and 1991 in which each of the forms of politicization was dominant in the Arab world. Initially after World War II, most of the Arab militaries were palace guards, responsible almost solely for defending and extending the rule of the regime over the country. Between 1948 and 1958, palace guardism gave way to praetorianism as the major form of politicization in the Middle East, with the Arab militaries turning on their masters. Between 1948 and 1967, many of the Middle East states either were outright military dictatorships or were under constant threat of a coup, a threat the military frequently brandished to manipulate government policy. Very quickly after the Six-Day War, however, praetorianism gave way to remarkably stable despotisms which gained their stability from heavy doses of commissarism.

These competing forces suggest that it may not always be possible to clearly distinguish among the different variants of politicization. By and large, we should be able to assign patterns of behavior to one cause or another, but not always. Consequently, I will try to differentiate the effects of one form or another, but in some instances it may prove necessary to rely on the single overarching variable of politicization of the military, that includes all of the various predictions among the three variants of the theory, rather than handling each separately.

**Figure 2a. Summary of Predictions of the Three Variants of Politicization of the Military**

<u>Commissarism</u>	<u>Praetorianism</u>	<u>Palace Guard</u>
Overcentralization		
Complex Chains of Command		
Incompetent Senior Leadership		Uneven Leadership
Little Initiative		
Slow Operational Tempo		
Little Innovation		
Little Use of Maneuver		Little Use of Maneuver
Poor Ad Hoc Operations		Poor Ad Hoc Operations
Poor Set-Piece Operations		Poor Set-Piece Operations
Poor Information Flows	Poor Information Flows	
Frequent and Sudden Officer Rotations		
Poor Morale	Poor Morale	Poor Morale
Little Personal Courage or Self-Sacrifice		
Poor Unit Cohesion	Poor Unit Cohesion	
Poor Intelligence Operations		
Poor Combined Arms	Poor Combined Arms	Poor Combined Arms
Poor Inter- and Intra-Service Coordination	Poor Inter- and Intra-Service Coordination	
Poor Air-to-Air Skills		Poor Air-to-Air Skills
Poor Air-to-Ground Operations		Poor Air-to-Ground Operations
	(Inadequate) Training	(Inappropriate) Training
		Poor Employment of Armor
		Poor Employment of Artillery



## Chapter 4

### A Theory of the Influence of Soviet Military Methods on Arab Military Effectiveness

In 1955, Egypt negotiated the purchase of a raft of modern weaponry from the Soviet Union, which used Czechoslovakia as a cut-out for the sale. The so-called "Czech arms deal" was a massive augmentation of Egyptian military strength which allowed Cairo to skirt the arms embargo Britain, France and the US had imposed on Israel and the Arab states to dampen further conflict in the region.<sup>1</sup> Egypt's success in obtaining the arms it desired on easy terms, the diplomatic freedom it gained by turning to Moscow, and the widespread mimicry of Gamal 'Abd al-Nasser's every move prompted other Arab states to follow suit. By 1970, Syria, Yemen, Iraq, and Libya had all concluded similar agreements with the USSR, and even staunch pro-Western monarchies such as Jordan and Kuwait eventually made smaller purchases of selected military systems from the Russians. Moreover, weapons were not the only thing the Soviets provided. In many cases, the Arab states received Soviet advice and training. Many Arab countries reorganized their armed forces along Soviet lines. Soviet advisers provided training in weapons handling and combat operations to a number of Arab states, and numerous Arab officers took courses at military schools in the USSR. Thus between 1955 and the collapse of the Soviet system in 1991, the USSR played a major role in the development of many Arab armies.

The Soviet influence has often been blamed for the poor military performance of the Arabs in the postwar era. Egyptian authors such as Anwar Abdel-Malek and Mahmud Hussein have argued that from the late 1950s onwards, "reliance on Russian weapons systems and the tactics which such systems necessarily implied," hindered Egyptian military operations.<sup>2</sup> These claims have been echoed by some Western commentators. For instance, one British scholar writes that "Arab disadvantages were heightened by the application of Russian introduced tactical models that were ill-suited for the fluid situation created by Israeli deep penetration tactics."<sup>3</sup>

According to this theory, Soviet military operations manifest a particular 'style,'

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<sup>1</sup> The Czech arms deal provided Egypt with 230 tanks (primarily T-34/85s), 200 APCs (mostly BTRs), 100 Su-100 self-propelled guns, 500 artillery pieces, 200 jet combat aircraft (120 MiG-15s, 50 Il-28s, and 20 Il-14s), as well as several destroyers, submarines and motor torpedo boats. This constituted an enormous increase in Cairo's arsenal. Prior to the deal, both Egypt and Israel had less than 200 tanks apiece. Moreover, the T-34/85 was far superior to any tank then in either arsenal. Most of the Egyptian tanks were British surplus from the Second World War, while most of the Israeli tanks were M-4A3 Shermans the IDF had scrounged from postwar scrap heaps. Similarly, before the Russian deal, Egypt possessed 80 old British jet aircraft (mostly Vampires) while Israel boasted only 50 early-model French jets (Ouragons and Meteors). Thus the MiGs and Ilyushins not only outnumbered the Israeli Air Force four-to-one, but also were far more capable aircraft. Moshe Dayan, *Diary of the Sinai Campaign*, First Paperback edition, (NY: Shocken Books, 1967), pp. 4-5; and Nadav Safran, *From War to War*, (NY: Pegasus, 1969), p. 209.

<sup>2</sup> Quoted in Roger Owen, "The Role of the Army in Middle East Politics: A Critique of Existing Analyses," *Review of Middle East Studies*, 3 1978, p. 70.

<sup>3</sup> Jon D. Glassman, *Arms for the Arabs*, (Baltimore, MD: Johns Hopkins University Press, 1975), p. 50.

developed in response to the specific circumstances of the USSR and the military experiences of the Red Army. It is assumed that this style is capable of only a narrow range of military operations, and these it handles in a crude and inefficient manner. Consequently, these authors believe Soviet military capabilities to be extremely limited, and generally explain Soviet successes (for example against the Finns at the end of the Russo-Finnish War, and against the Germans in the latter half of the Second World War) as the result of overwhelming numbers.

The second assumption of this theory is that the Soviet style was transmitted to the Arab armies with whom the Soviets dealt between 1955 and 1991. In virtually every case, the Russians provided at least some training to the Arab states who bought military hardware from them. Quite naturally, the Soviet training conformed to the Soviet style of warfighting and so, along with their T-55s and MiG-21s the Arabs also received doses of Soviet tactics, organization, doctrine and other military methods. According to the theory, this training and advice caused the Arabs to fight in the Soviet "style," and it was this style that was the source of Arab military ineffectiveness.

In this chapter I examine the theory that Arab military problems are the result of reliance on a Soviet model of military operations. I begin with a brief explanation of how I handled the Soviet military style as a variable. I go on to describe the salient characteristics of the Soviet military system, its strengths and weaknesses. I then use this portrait of the Soviet military to derive predictions about the expected battlefield performance of Arab militaries to the extent that they were influenced by a Soviet model of operations.

### **The Soviet Model as an Independent Variable**

There are actually a number of possible ways to handle this theory as a potential explanation for Arab military effectiveness since 1945. Consequently, I want to make clear how I approached this variable before proceeding. First, my methodology was to develop a model of Soviet military operations by relying on accounts of Soviet military history since the Russian Civil War, as well as more recent assessments of Soviet military capabilities by Western experts. All of the more recent assessments were done for the purpose of trying to gauge the balance of military power in central Europe during the Cold War. These sources provide excellent insights into Soviet military methods, organization, tactics and doctrine.

My reason for bringing this to the reader's attention is to point out that I have *not* put together my model of Soviet operations from the accounts of those authors who ascribe Arab military weakness to Soviet influences. I have chosen to handle the theory in this way because many of the authors who have blamed the Soviet system for Arab problems are not necessarily experts on the Soviet military and so there is no particular reason to accept their assertions that specific patterns of military behavior are characteristic of the Soviet armed forces. For example, one highly respected Middle East expert has asserted that "Iraq's strategy may also have been influenced by Soviet military training, which is strong on defense, weak on offense."<sup>4</sup> As discussed below, this statement is dead wrong: in fact, the Soviets consistently stressed offensive operations to the neglect of training for defense. In addition, the subject of Arab military ineffectiveness is extremely controversial, and many of these authors may have blamed Arab military ineffectiveness on the Soviets for reasons of their own and with little actual understanding of the workings of the Soviet armed forces. By contrast, the histories and assessments I relied on were written by experts on the Soviet military who can be trusted to present a far more accurate portrait of Soviet methods. In addition, none of these experts was writing about the USSR with the intent of explaining *Arab* military

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<sup>4</sup> Phebe Marr, *The Modern History of Iraq*, (Boulder, CO: Westview, 1985), p. 295. Marr's slip on what is ultimately a minor point given her theme should not detract from her book, which is unquestionably the finest history of twentieth century Iraq.

performance, hence there is no reason to believe they slanted their depiction of the Soviet military to favor one side or another in this particular debate.<sup>5</sup>

A second reason for relying on military histories and expert assessments of the Soviet armed forces rather than the assertions of authors writing on the Middle East is that it was a better test of the general supposition that Arab military problems derive from Soviet influence. It may well be the case that many of the authors who have blamed Soviet methods for Arab failings are right in the general sense, but have some of the details wrong. As noted above, most of the authors who make these claims are not experts on the Soviet military and therefore it is entirely possible that they mistakenly attributed a specific problem to the Soviets when, in fact, the Soviet approach does not espouse the behavior they have pointed to. For example, some authors claim that the Soviet military system is incapable of coping with fast-moving battles. In fact, most authorities on the Soviet military claim exactly the opposite, that the Soviets generally *favor* a high-tempo of operations in their own offensives, and eventually learned to deal quite well with fast-paced German offensives during WW II. Nevertheless, although this specific claim may be wrong, it does not mean that the theory itself is wrong--the Arabs still may suffer from problems associated with the Soviet model--just not necessarily those specified by Middle East experts.

A related issue is whether the Soviet "model" should be considered to be the ideal, or the reality. Soviet doctrine espouses any number of dictums that their forces were rarely able to live up to in actual practice. Moreover, because of the hypocrisy and double-talk endemic to the Soviet system and the need to square military necessity with communist ideology, formal Soviet doctrine often proclaimed one thing, while there was widespread understanding that things actually worked in another way. For the most part, I have tried to stick with the reality of the Soviet system, rather than its ideal. I felt that if the Soviets could not figure out how to do something right, then even if in their formal doctrine they stressed how important it was to do something right, and even if their doctrine had a good explanation of the right way to do something, it was still indicative of a general problem in their training method--a problem they were likely passing on to their Arab proteges.

### **The Soviet Way of War**

Perhaps the most characteristic feature of the Soviet military, and the facet most often noted by non-Soviet observers, was the peculiar duality of their command structure. John Erickson pointed out this quality in remarking that, "In many respects, Soviet performance was a paradox: centralization and inflexibility giving way to improvisation and rapid adaptability, doggedness to deftness, the unimaginative and the stolid to boldness and even dash."<sup>6</sup> The key to this enigma lies in the Soviets' focus on what they referred to as the "operational" level of warfare. The operational level (what the British and other Western Europeans previously referred to as "grand tactics") is the broadest level of operations within a single campaign or theater: it focuses on the employment of fronts (the Soviet term for army groups), armies, corps, and sometimes divisions. Whether by choice or necessity, the Soviets concluded that victory in war could only be

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<sup>5</sup> Of course, many of these experts were caught up in the rancorous debates over the military balance between NATO and the Warsaw Pact during the cold war and it is entirely possible that their stance in this debate did distort their analysis of Soviet capabilities. Unfortunately, some bias is probably unavoidable, and I felt it better to accept bias in this area rather than on the specific issue of the sources of Arab military ineffectiveness--which would, of course, be much more problematic for my study.

<sup>6</sup> John Erickson, Lynn Hansen, and William Schneider, *Soviet Ground Forces: An Operational Assessment*, (Boulder, CO: Westview, 1986), p. 20.

secured by winning at the operational level, and therefore they consciously and consistently sought to maximize their ability to prevail at the operational level, even at the expense of tactical effectiveness.

The most important and far-reaching outcome of this focus was the difference in command and control the Soviets created between their tactical formations and their operational (and strategic) formations. Essentially, the Soviets believed that to maximize their ability to prevail at the operational level they had to ensure that operational level commanders had the maximum latitude to make decisions and the maximum ability to call on military assets. Consequently, the Soviets tended to directly subordinate far more of their assets at much higher levels of command than did Western armies. For example, throughout most of the twentieth century, Soviet divisions, regiments, and battalions had relatively few helicopters, engineers, logistical support, repair and maintenance, and intelligence gathering assets when compared to their Western counterparts. This was because the Soviets tended to centralize these forces at army and front level, so that the operational-level commanders could determine where best to concentrate their resources in pursuit of their goals.<sup>7</sup>

The desire to maximize the flexibility of operational commanders had a heavy impact on the independence, freedom of action, and creativity the Soviets expected of their tactical commanders. It was generally the case that the Soviets expected their senior officers to be aggressive, innovative, flexible, and decisive, and they expected their junior officers to be obedient. They wanted to ensure that when a senior officer gave an order to his subordinates, the senior officer would know exactly how his subordinates would execute the mission and could plan accordingly. If tactical commanders were to use their own judgment to formulate a plan on the spot, their commander would essentially be responding to the actions of his subordinates because he would have to provide them with any needed support and he would have to organize the rest of his forces according to the dictates of their plan. The Soviets considered this sort of a situation to be absurd and so designed a system that would ensure that it was the subordinates who were always reacting to the plans of their superiors. In addition, the Soviets maintained that giving junior officers decision-making responsibility restricted the freedom of action of the senior officers because actions taken by a junior officer on his own initiative could prevent his commander from employing those forces for a different mission.<sup>8</sup>

For Soviet junior officers, NCOs, and enlisted personnel, this approach meant a training system that was tremendously rigid and consciously sought to limit their independence and initiative. According to Herbert Goldhamer, "The Soviets have a pronounced tendency to provide regulations for almost all aspects and contingencies of military life in order to constrain behavior within narrow, authorized limits."<sup>9</sup> Christopher Donnelly remarks that:

A Soviet battalion commander, operating as part of a larger force, has no more liberty in the performance of his mission than a British platoon commander; but during his military training he will have been taught very thoroughly and in detail how to implement a variety of drills, a careful selection from which should enable him to cope with most of the tactical problems he will meet on the battlefield.<sup>10</sup>

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<sup>7</sup> Christopher Donnelly, *Red Banner: The Soviet Military System in Peace and War*, (Alexandria, VA: Jane's Publishing Inc, 1988), pp. 86, 217.

<sup>8</sup> Steven L. Canby, *The Alliance and Europe. Part IV: Military Doctrine and Technology*, Adelphi Paper 126, (London: IISS, 1976), pp. 10-11; Donnelly, *Red Banner*, p. 85.

<sup>9</sup> Herbert Goldhamer, *The Soviet Soldier: Soviet Military Management at the Troop Level*, (NY: Crane Russak and Co. Inc., 1975), p. 311.

<sup>10</sup> Donnelly, *Red Banner*, p. 221.



The opportunities for displaying initiative even by divisional commanders were severely restricted. Not below army level was any initiative usually expected, and even then only on occasion. It became important that the subordinate formation and unit commanders followed set orders, implementing them by means of a number of established alternative drills. The commander, therefore, did not make a plan, but a "decision," that is, he decided from a choice of alternatives upon one "variant," amended it according to local circumstances, and implemented it.<sup>11</sup>

Donnelly's comments raise an important distinction regarding Soviet tactical decision-making. It is not that Soviet junior officers were trained to be automatons, completely bereft of all judgment and mindlessly implementing the detailed plans of their superiors, but that they were severely *limited* in their decision-making. Soviet junior officers had a very short "menu" from which to choose a means of executing an order, but it was the commander on the spot that did decide from the menu. Moreover, the local commander was expected to adapt the generic plans to the specific circumstances at hand. These split hairs aside, all of this added up to mostly formulaic execution and difficulty reacting quickly to changing situations. For example, as late as 1987, Mujahideen leader Abdul Haq could assert that, "in Afghanistan, you need quick decisions and still Russian officers cannot decide for themselves without going back to their higher commands."<sup>12</sup>

These problems extend to the Soviet air forces as well, which Western military experts have consistently characterized as inflexible, dogmatic, and tactically inefficient. Goldhamer writes that "Personal initiative in flight training in the Soviet Air Force is severely restricted until the final stages of training are reached. In teaching air combat, the elements of battle are played out in a stipulated maneuver in which the actions of the attacker and attacked are clearly specified."<sup>13</sup> Soviet aviation doctrine allows little deviation to suit unique situations or to exploit fleeting opportunities.<sup>14</sup>

The impact of Soviet air force doctrine was clearly demonstrated in Afghanistan. Russian ground attack missions were highly inaccurate when employing fixed-wing aircraft such as the MiG-23 and MiG-27. (Although Soviet pilots proved far more competent when employing the Su-25 ground attack aircraft.) Anthony Cordesman and Abraham Wagner concluded that these problems were primarily the result of dogmatic training and a lack of forward air controllers.<sup>15</sup> Until very late in the war, Soviet pilots were forbidden from attacking targets of opportunity because all strike missions had to be planned and approved at the highest levels and pilots were not allowed to deviate from them. In accord with the Soviet practice of controlling all aviation assets at higher echelons, Soviet tactical ground commanders never had even temporary control over the aircraft tasked to provide them with ground support, with the result that Soviet airstrikes

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<sup>11</sup> Donnelly, *Red Banner*, p. 85.

<sup>12</sup> Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War, Vol. III: The Afghan and Falklands Conflicts*, (Boulder, CO: Westview, 1990), p. 122. On the general rigidity of Soviet tactical doctrine, also see Canby, pp. 10-11; Cordesman and Wagner, pp. 116-117, 206; Donnelly, *Red Banner*, pp. 179-185, 216-217, 223-225; Goldhamer, pp. 97-98, 100-101, 311-315; and John Hemsley, "The Soviet Ground Forces," in John Erickson and E. J. Feuchtwanger eds., *Soviet Military Power and Performance*, (Hamden CT: Archon Books, 1979), pp. 32-33; Erickson et. al., *Soviet Ground Forces*, p. 10. For descriptions of the real initiative, flexibility, and creativity Soviet commanders were capable of at all levels during the Second World War, see Historical Evaluation and Research Organization, *Studies in Soviet Combat Performance*, hereafter referred to as HERO, (McLean, Va: NOVA Publications, 1977), esp. pp. 2, 17, 41, 63-64, 73-74, 109, 202.

<sup>13</sup> Goldhamer, p. 102.

<sup>14</sup> Erickson, et. al., *Soviet Ground Forces*, p. 205.

<sup>15</sup> Cordesman and Wagner, pp. 182-184.

were slow to respond to developments on the ground and frequently squandered opportunities to hurt the Mujahideen or aid their own forces.<sup>16</sup>

Historically, this situation has resulted in consistently poor Soviet tactical performance, while strategic/operational level performance was uneven, varying widely with the caliber of the generals in charge (which in turn was highly dependent on the degree of commissarist politicization the military was suffering under). For example, at Khalkin Gol, General Zhukov succeeded because of a brilliant operational plan, material superiority over the Japanese, and lengthy time to plan and prepare his moves, but largely *despite* the extremely limited capabilities of the units under his command.<sup>17</sup> Likewise, during the Second World War a major factor in the dramatic reversal in Soviet fortunes was the remarkable improvement in Soviet generalship after Stalin depoliticized the officer corps in 1941-1942. While it is true that the Soviets often prevailed over the Germans through sheer weight of numbers rather than tactical skill, this ultimately bears testimony to the formidable talents of Soviet operational leadership, which frequently succeeded in outmaneuvering the Germans and consistently concentrated enormous force against the *Wehrmacht's* weak points.<sup>18</sup>

Indeed, because Soviet tactical performance was regularly so poor, and because the Soviets could normally count on outnumbering a foe in most indices of military power, Soviet commanders were taught to substitute masses of tactical formations for skilled tactical performance. Soviet commanders were trained to make up for tactical "imperfections" with "ruthlessness and brutality," and a willingness to accept high casualty figures in the course of operations, according to Donnelly.<sup>19</sup> Soviet commanders fighting the Japanese, the Finns and the Germans were consistently willing to sacrifice enormous casualties in pursuit of operational objectives. Soviet exercises and military writings during the Cold War similarly favored expending men and machines to achieve the goals of a mission.<sup>20</sup>

The Soviets have always stressed offensive operations. Even before the Second World War, the evolving Soviet ideas about modern warfare developed by officers such as Tuchachevski emphasized the need to seize the initiative by going on the offensive. The experience of World War II reinforced this preconceived notion as the Soviets learned that as long as they left the initiative to the Germans, the *Wehrmacht* was able to conquer vast tracts of Soviet territory and pummel Soviet military forces. Only by going over to the offensive themselves were the Soviets able to dictate the course of operations to the Germans, destroy the *Wehrmacht*, retake their land and win the war.<sup>21</sup> Consequently, in John Erickson's words, "The Soviets consider the offensive the basic form of combat action, playing a decisive role in achieving victory. . . . The Soviets recognize defense only as something the enemy does, or as a temporary local measure to prepare a successful offensive."<sup>22</sup> William Schneider adds that, "the Soviets emphasize that the offensive is the only means of achieving victory. The constant repetition of

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<sup>16</sup> Cordesman and Wagner, pp. 206-207.

<sup>17</sup> Alan Clark, *Barbarossa: The Russian-German Conflict, 1941-1945*, (NY: Quill, 1965), p. 37.

<sup>18</sup> Clark, pp. 53-54, 149, 177, 346; Donnelly, *Red Banner*, p. 187; Erickson, et. al., *Soviet Ground Forces*, p. 20, 205; John Erickson, *The Road to Stalingrad: Stalin's War with Germany, Vol. 1*, (London: Weidenfeld and Nicolson, 1975), esp. pp. 7-8, 22, 27.

<sup>19</sup> Christopher Donnelly, "The Soviet Soldier: Behavior, Performance, Effectiveness," in Erickson and Feuchtwanger eds., *Soviet Military Power*, p. 125.

<sup>20</sup> Clark, esp. p. 55; Erickson, *The Road to Stalingrad*, pp. 101-472; John Erickson, *The Road to Berlin: Stalin's War with Germany, Vol. II*, (London: Weidenfeld and Nicolson, 1983) also see Donnelly, *Red Banner*, p. 82.

<sup>21</sup> John Erickson, *The Road to Stalingrad*, esp. p. 26; and Benjamin Miller, "The Development of Soviet Armor, 1926-1982," Unpublished Ph.D. dissertation manuscript, Cornell University, 1984, pp. 25-103.

<sup>22</sup> Erickson et. al., *Soviet ground Forces*, p. 51.

offensive themes in exercise scenarios, after only a short defensive plan, further confirms its importance in Soviet doctrine."<sup>23</sup> These sentiments are borne out by the constant stress on offensive operations in Soviet training. For example, the Soviet General Staff Academy teaches that "the offensive constitutes the principal form of strategic actions of the armed forces," and, "defense is considered a forced form of military action. Defense is assumed only when forces and means are not sufficient to attack or when gaining time may be necessary in order to concentrate forces and provide favorable conditions for the initiation of a decisive offensive operation."<sup>24</sup> Indeed, so great was the Soviet stress on offensive operations that commanders were taught to try to launch an immediate offensive in response to an enemy offensive: "A first-echelon front should be ready to initiate the offensive in situations requiring repelling the enemy in a meeting engagement or enemy attack, destroying opposing enemy groupings, and ensuring the development of the operation in great depth with a high rate of advance."<sup>25</sup>

Soviet offensives relied on a combination of factors for success. The first was surprise. The Soviets learned from their own rout by the Germans in 1941 that surprise can be an overpowering advantage to the attacker and so they made surprising their adversary a crucial characteristic of their operations.<sup>26</sup> To this end, the Soviets developed an extremely formidable capability for camouflage, concealment and deception (*Maskirovka*).<sup>27</sup> With regard to secrecy, operational security and deception operations, Schneider concluded in 1986 that, "this is one area in which the Soviets excel. Their capability for deception exceeds that of all their potential opponents."<sup>28</sup> Closely related to the Soviet obsession with *maskirovka* and obtaining surprise was a constant attention to reconnaissance and intelligence gathering.<sup>29</sup> Despite this emphasis, in practice, the Soviets had a very mixed experience with reconnaissance operations. Soviet senior leadership tended to do a pretty good job, putting to good use the various intelligence assets available at army, front, and theater levels and constantly prodding subordinates to

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<sup>23</sup> Erickson et. al., *Soviet ground Forces*, p. 103. See also John Erickson, *The Road to Stalingrad*, p. 28; John Erickson, "The Soviet Military System: Doctrine, Technology and 'Style,'" in Erickson and Feuchtwanger, *Soviet Military Power*, pp. 28, 51; Raymond L. Garthoff, *How Russia Makes War: Soviet Military Doctrine*, (London: George Allen and Unwin Ltd., 1954), pp. 67-73; Hemsley, p. 48; Amnon Sela, "Soviet Military Doctrine and Arab War Aims," in Itamar Rabinovich and Haim Shaked eds., *From June to October: The Middle East Between 1967 and 1973*, (New Brunswick, NJ: Transaction Books, 1978), pp. 80-81. One of the most revolutionary aspects of Gorbachev's attempt to reform the Soviet military in the latter half of the 1980s was his support for the concept of "defensive defense." The notion that Soviet forces would consciously plan to adopt the strategic defensive in a war, and not merely as a temporary measure until the Red Army could go on the offensive, struck at the heart of Soviet military doctrine, and was one of many such proposals that helped alienate the military from Gorbachev and his policies.

<sup>24</sup> Col. Ghulam Dastagir Wardak (compilation and transcription), *The Voroshilov Lectures: Materials from the Soviet General Staff Academy*, Vol. 1, (Washington, DC: NDU Press, 1989), pp. 83 and 264. Colonel Wardak was an Afghan military officer who went through the Voroshilov academy staff officer's course in 1973-1975. Although all of the materials used in the course were highly classified and tightly controlled, Wardak smuggled out 40 notebooks of transcribed materials and notes, in many cases including verbatim lecture transcripts. Wardak eventually joined the Mujaheddin after the Soviet invasion in 1979 and turned these notebooks over to the United States government. They provide a remarkable window into Soviet military thinking during the period of their greatest influence with the Arab militaries.

<sup>25</sup> Wardak, p. 272.

<sup>26</sup> Donnelly, *Red Banner*, p. 254; Garthoff, pp. 272-274; Hemsley, p. 48; HERO, 24, 41, 51, 72, 194; Miller, pp. 260-263; Wardak, pp. 171, 173-175, 219-220, 224, 228-229, 291, 297-298, 321.

<sup>27</sup> Clark, p. 123; Garthoff, pp. 265-272.

<sup>28</sup> Erickson et. al., *Soviet ground Forces*, p. 217.

<sup>29</sup> Erickson, et. al., *Soviet Ground Forces*, p. 183; Garthoff, pp. 253-262; Goldhamer, p. 115; Hemsley, pp. 49, 55-60; Miler, pp. 265, 463-464; Wardak, pp. 226, 229, 291, 292-295, 317.

reconnoiter their sector of the front.<sup>30</sup> Schneider asserts that, "The importance that Soviet military science attaches to reconnaissance cannot be overstated. In some World War II campaigns, for example, twenty-five to thirty percent of all aerial sorties were for reconnaissance purposes."<sup>31</sup>

The Soviets also taught that a successful offensive required a fast operational tempo (OPTEMPO). A high OPTEMPO allowed the attacker to constantly keep the defender on his heels, forcing him to respond to the attacker's blows before his forces were ready. Thus Soviet forces were trained incessantly to penetrate the enemy's front and push quickly into his depth, bypassing areas of resistance to maintain the momentum of the attack.<sup>32</sup> According to Benjamin Miller, the Soviets recognized a key interaction between offensive operations, surprise and a high OPTEMPO. As Miller describes it, the Soviets taught that surprise was best exploited by offensive operations to keep the initiative and force the adversary to react to your actions, and a rapid pace of operations was crucial to magnify the effects of surprise and prevent the defender from regrouping sufficiently to put up strong resistance.<sup>33</sup>

Another aspect of Soviet military practice that can be traced back to Tuchachevski and the interwar Soviet military theorists is the importance of deep offensive thrusts. Soviet strategy for offensive operations was to penetrate as far (and as fast) into the enemy's operational depth as was possible. John Hemsley states that the Soviet "accent is on deep armored thrusts through to strategic objectives rather than seizing and holding ground at a tactical level."<sup>34</sup> During some of the Soviet offensives in 1944 and 1945, the Red Army drove as much as 200 kilometers into German rear areas before they brought the offensive to a halt to regroup for the next attack.<sup>35</sup>

Soviet doctrine also emphasizes reliance on maneuver to concentrate overwhelming mass at the decisive point of the front (the *schwerpunkt*, as the Germans termed it) and to employ flanking attacks and encirclement to destroy enemy forces with the minimum necessary force.<sup>36</sup> During the Second World War, Soviet commanders displayed a remarkable talent for both principles. Even during the disastrous summer of 1941, the Germans were amazed at how Soviet generals constantly worked the flanks of German penetrations with counterattacks. In 1943-1945, Soviet generals regularly were able to concentrate sufficient forces to have 10:1, 20:1 or even greater superiority over the Germans in tanks, artillery pieces and men at the *schwerpunkt* of the attack. Likewise, Soviet offensives consisted of constantly interlocking inner and outer encirclements of German forces.<sup>37</sup> After World War II, the Soviets began to integrate airborne and helicopter units into their operations to conduct "vertical" envelopments of enemy forces.<sup>38</sup> Indeed, in Afghanistan, the Soviets became extremely adept at inserting elite *Spetsnaz* and airborne units to block the exits from a valley before sending mechanized forces into it to destroy any Mujahideen operating there. The Mujahideen

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<sup>30</sup> Cordesman and Wagner, pp. 107-108; Erickson, et. al., *Soviet Ground Forces*, p. 183; HERO, pp. 8-13, 17, 24, 108, 133, 194.

<sup>31</sup> Erickson, et. al., *Soviet Ground Forces*, p. 183.

<sup>32</sup> Donnelly, *Red Banner*, p. 252; Garthoff, pp. 89-90; Hemsley, pp. 48, 55; HERO, pp. 14, 29, 34-35, 60; Miller, pp. 262-263; Wardak, pp. 177, 272, 311.

<sup>33</sup> Miller, pp. 262-263.

<sup>34</sup> Hemsley, p. 48.

<sup>35</sup> Donnelly, *Red Banner*, p. 76; Erickson, *The Road to Stalingrad*, p. 26; Hemsley, p. 48, 55, 63; Miller, pp. 25-103; Wardak, pp. 272, 275-277, 309-310, 311.

<sup>36</sup> Donnelly, *Red Banner*, p. 81; Erickson, *Soviet Military Power*, p. 18; Erickson, et. al., *Soviet Ground Forces*, p. 214; Hemsley, pp. 48, 55;

<sup>37</sup> Clark, pp. 80, 257-472; Erickson, *The Road to Stalingrad*, pp. 101-472; John Erickson, *The Road to Berlin*, entire; HERO, entire, esp. pp. 31, 109, 311, 275.

<sup>38</sup> Hemsley, p. 48; Miller, pp. 264-265.

described these as the most effective Soviet operations they had to face.<sup>39</sup>

Perhaps more than any other military, the Soviet armed forces emphasized combined arms operations as the key to success in modern combat.<sup>40</sup> The Soviets were among the first to understand the need to integrate armor, infantry, artillery, engineers, airpower and other supporting elements into combined arms teams.<sup>41</sup> William Schneider writes that:

The Soviet Union has come closer to creating a combined arms outlook among its forces than any other country. Starting from the level of the squad, the armored infantry (fighting) machine (BMP) comes close to uniting, armor, and infantry. The Soviets have so blurred the difference between "artillery" and mortars at the appropriate levels that artillery truly can be said to be integrated with the infantry in the Soviet Ground Forces. Similarly, the Soviets have blurred the distinction between armor and infantry by emphasizing combined arms at the expense of tanks. Not only does the BMP provide an armored fighting vehicle at the lowest organizational levels but tanks are being integrated into the infantry at lower and lower levels.<sup>42</sup>

Although the military effectiveness of Soviet forces has varied over time, their stress on integrating their forces into combined arms teams has remained a constant. Alan Clark remarks that a key element of Russian success at Khalkin Gol was the "cooperation between all arms, especially the artillery" and armor elements.<sup>43</sup> Throughout the Second World War, Soviet military units consistently showed an excellent grasp of combined arms operations, and even when they lacked the equipment to put their doctrine into practice, they usually found a way to improvise and achieve the same results--such as having infantry ride into battle on the backs of the T-34s when not enough motor transport was available.<sup>44</sup> In his encirclement of the German forces in the Korsun-Shevchenkivsky bulge in January 1944, General Konev of the 2nd Byelorussian Front stripped much of the armor from the 5th Guards Tank Army to ensure that the 53rd Army had adequate armored support to break through the German defenses. While this diminished the striking power of his exploitation force, Konev concluded that without a proper combined arms mix, 53rd Army would not be able to breakthrough at all, making exploitation a moot point.<sup>45</sup> Similarly, the Soviets invaded Afghanistan with extremely well-integrated combined arms teams; unfortunately, for them, the forces they brought were designed for high intensity combat on the North German plain and were entirely inappropriate for counter-insurgency operations in the mountains of Afghanistan. Nevertheless, by 1984, the Soviets had dramatically transformed their army in

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<sup>39</sup> Cordesman and Wagner, pp. 38-50.

<sup>40</sup> Indeed, John Mearsheimer oddly faults the Soviets for having *overemphasized* combined arms warfare and too thoroughly integrated combined arms into their operations. John Mearsheimer, *Conventional Deterrence*, (Ithaca, NY: Cornell University Press, 1983), p. 184. Also see Erickson, "The Soviet Military System," p. 33; Erickson, et. al. *Soviet Ground Forces*, pp. 16, 181, 217-218; Garthoff, pp. 171-182; Hemsley, pp. 48-50; Jonathan House, *Toward Combined Arms Warfare*, (Fort Leavenworth, Ks: CGSC, 1984), pp. 64-69, 99-103, 121-125, 142-146; Miller, pp. 35-102, 270; Wardak, pp. 82, 240-242; and author's interview with General Bernard Trainor, May 1994.

<sup>41</sup> Erickson, et. al., *Soviet Ground Forces*, p. 16; Miller, p. 105.

<sup>42</sup> Erickson, et. al., *Soviet Ground Forces*, pp. 217-218.

<sup>43</sup> Clark, p. 37.

<sup>44</sup> Clark, entire, esp. p. 279; Erickson, *The Road to Stalingrad*, pp. 101-472; Erickson, *The Road to Berlin*, entire; HERO, esp. pp. 29-29, 43..

<sup>45</sup> HERO, p. 27.

Afghanistan, forging a (for them) new type of combined arms team that relied on mechanized forces equipped with lighter weapons (for example, BTRs instead of BMPs), airmobile elite infantry units (*Spetsnaz* and airborne troops), light artillery units, engineers, and helicopter gunship support.<sup>46</sup> This mix worked quite well for the Soviets, so well that the US and UK eventually felt obliged to provide the Mujahideen with advanced surface-to-air missiles (Stinger and Blowpipe) and anti-tank guided missiles (Milan), which in turn allowed the Mujahideen to inflict heavy casualties on the Soviets and eventually force them to withdraw.<sup>47</sup>

Despite the accent on combined arms operations, the Soviets still had a fondness for tanks and artillery. Soviet units were "tank heavy" in general, virtually the entire Red Army was motorized and then mechanized after World War II, and--as their experience in Afghanistan demonstrated--Soviet troops were trained exclusively for mechanized operations. Indeed, by the early 1980s, there were very few "leg" infantry units left in the Soviet Army, and these units were all elite special forces, airborne, or airmobile units that were intended to be dropped behind the enemy's front lines in support of the armored thrusts. Even within Soviet mechanized formations, the tanks were the centerpiece of Soviet operations, as all of the other arms were generally intended to support the armor and aid it in its missions.<sup>48</sup>

The importance of armor to Soviet operations did not necessarily translate into good tank tactics. Instead, Soviet tank tactics, especially in World War II and the early Cold War period were fairly poor. German panzer units regularly defeated far larger Soviet armored concentrations--often equipped with far superior tanks--and the Germans considered Soviet tank units to have performed well below the potential of their equipment. In particular, Soviet tank tactics were extremely simplistic and stereotyped. This pattern continued on until late in the Cold War, with Soviet armored forces attacking in waves of massed tanks that relied largely on their weight of numbers to overpower an adversary.<sup>49</sup>

Although tanks may have been the "arm of decision," artillery was the primary means of massing firepower. The Soviets saw artillery as crucial to puncturing the enemy's fixed defenses, causing the breakthrough which the armor would exploit.<sup>50</sup> Despite the importance they attached to its role, Soviet artillery was not very good and Moscow's armies generally relied on massed artillery fire to compensate for the inaccuracy of their gunners. Although many Soviet artillery pieces were extremely formidable, and Soviet artillerymen were very good at developing complex fire plans to support the actions of the maneuver units, they rarely could direct precision fire against battlefield targets nor could they effectively shift fire in response to unforeseen developments.<sup>51</sup> In particular, Soviet artillerymen had consistent difficulties with the most demanding fire missions, such as counter-battery fire.<sup>52</sup>

Because of the dominance of the ground forces in Soviet military strategy, air

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<sup>46</sup> In truth, the need for a new combined arms team was only a minor aspect of the shift in Soviet operations in Afghanistan. The most important reason for the shift to reliance on elite units rather than line formations was, as noted previously, the fact that the line units were being mauled by the Mujaheddin and only the elite forces could operate in small units and consistently defeat the rebels.

<sup>47</sup> Cordesman and Wagner, pp. 38-41, 45-94, 117, 124.

<sup>48</sup> Hemsley, p. 53; Miller, 264-265, 452; Sela, p. 81.

<sup>49</sup> Garthoff, pp. 308-315.

<sup>50</sup> Cordesman and Wagner, pp. 125, 157-158; Erickson, et. al. *Soviet Ground Forces*, p. 214; Garthoff, pp. 301-307; Hemsley, p. 53.

<sup>51</sup> Clark, p. 246, 278-279, 330; HERO, pp. 119-120; author's interview with General Bernard Trainor, May 1994. For some very good accounts of Soviet artillery planning in preparation for major offensive operations see HERO, esp. pp. 91-95, 194.

<sup>52</sup> Cordesman and Wagner, pp. 157-158.

power was relegated to missions in support of the army and was directly subordinated to the higher-echelon ground commanders. Nevertheless, the Soviets recognized the need for air superiority over the battlefield, primarily because their experience in World War II taught them that the side with mastery of the skies can greatly inhibit the ground operations of its adversary. Consequently, the Soviets wanted to make sure that they had air supremacy and not their adversary. For this reason, counter-air missions had a high priority in the Soviet Air Force. The Soviet General Staff academy taught that "For successful initiation and conduct of strategic operations using conventional weapons, gaining air superiority is of particular significance."<sup>53</sup> In addition, the Soviets stressed air missions in direct support of ground forces such as reconnaissance, close-air support (CAS) and battlefield air interdiction (BAI). The Soviets did not buy into Western "airpower theory" hence they paid little heed to strategic bombing or deep interdiction missions.<sup>54</sup>

Soviet logistics were generally characterized as unsophisticated but effective.<sup>55</sup> The Soviets developed a "push" logistics system in which higher formations regularly sent supplies forward to subordinate formations without specific requests from the front line units. While this method was somewhat wasteful, it was the best guarantee that the advancing armored units would not have to stop and wait for supplies.<sup>56</sup> The Soviets stressed the replacement of combat units rather than their reconstitution in place. Thus Soviet units were often referred to as "disposable," because they were tailored to participate in high intensity combat operations for only a few days, at which point the entire formation would be pulled off line and reconstituted *in toto*. For example, Erickson observes that the Soviets expected a Motorized Rifle Division (MRD) to be engaged in combat for five days at which point it would be combat ineffective and withdrawn from the fray.<sup>57</sup> Similarly, Steven Canby has remarked that Soviet "combat divisions and even armies can be used like drill tips on a high-speed drill--ground down and replaced until penetration occurs."<sup>58</sup> This practice also helped to ensure the maximum rate of advance for attacking Soviet forces because it meant that units did not have to stop for refit: there were always fresh units ready to take the place of those exhausted in combat.<sup>59</sup>

The combination of the Soviet focus on high-speed armored offensives and their general tendency to replace units in combat rather than reconstituting them, meant that while maintenance was expected to be high among Soviet combat formations to ensure that the fewest number of weapons were off-line because of mechanical problems, repair skills were not a major concern because the Soviets generally expected to replace combat losses rather than repair them. In addition, to obviate the need for proper maintenance, Soviet units kept their combat equipment in storage and practiced either with small portions of that equipment or with older models of the same weapons. This kept the

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<sup>53</sup> Wardak, p. 262.

<sup>54</sup> Erickson, et. al., pp. 181-184, 186-193, 198; Sela, p. 84; Wardak, pp. 260, 262, 273, 278-279, 311, 316-339.

<sup>55</sup> Clark, p. 41; Cordesman and Wagner, p. 211; Erickson "The Soviet Military System," pp. 32-33; Hemsley, p. 48; and author's interview with General Bernard Trainor, May 1994.

<sup>56</sup> Donnelly, *Red Banner*, p. 217; Hemsley, pp. 48, 66-68. By contrast, traditional "pull" logistics systems require combat units to request specific supplies from their superior formations, and in many cases, send their own transport to collect the needed supplies. While this system has the benefit of minimizing waste, it is not terribly responsive to the demands of a fast-paced armored offensive, and there have been many occasions in modern military history when offensives have ground to a halt because of delays in getting the needed supplies to the frontline troops.

<sup>57</sup> Erickson, "The Soviet Military System," p. 34.

<sup>58</sup> Canby, pp. 10-11.

<sup>59</sup> Erickson, "The Soviet Military System," p. 34; Erickson, et. al. *Soviet Ground Forces*, p. 35; Hemsley, p. 68;

latest equipment in pristine condition, ready for use when war came. As a result, the best Soviet units showed very high standards of maintenance but had very little organic repair and recovery capabilities.<sup>60</sup> Soviet repair and recovery assets were instead concentrated at higher echelons (army- and, especially, front-level) that could be employed to completely reconstitute a unit after it had been ground down in combat.<sup>61</sup>

Although perhaps not quite as obsessed with technology as their various opponents, the Soviets too emphasized the technical skills of their personnel and scientific support to their military at all levels. Moscow consistently sacrificed in other areas to deploy the most technologically advanced weaponry it could, and Soviet forces in the field frequently relied on technological solutions to military problems.<sup>62</sup> Soviet instructors generally tried to teach their students (at least those who could read Russian) to understand the scientific principles behind specific technical skills. Soviet commanders relied heavily on systems analysis and statistical techniques to shape strategy and doctrine. Personnel assignments at tactical levels were frequently determined by technical competence. Indeed, because of the importance attached to technical abilities in the military, Moscow constantly stressed the need for technical skills among its populace, and by the mid-1970s nearly half of all Soviet secondary students attended vocational or technical schools.<sup>63</sup>

### **Predictions of the Theory**

According to the theory, the problems Arab militaries have experienced in combat are a result of their adoption of Soviet military practices. To the extent that this is the case, we should be able to infer predictions regarding the combat performance of Arab armies from actual Soviet methods, summarized above. That is to say, the Arabs ought to fight like the Soviets, and should have most of their same strengths and weaknesses.

#### **Unity of Command**

Because of the tremendous Soviet emphasis on maintaining control at higher levels, we should expect to find that *Arab militaries have severely overcentralized command structures in which all but the most innocuous decisions are made by the senior officers.*

#### **Initiative**

The obvious corollary to overcentralized authority is the unwillingness of junior commanders to show initiative. As was the rule among Soviet tactical commanders, *Arab junior officers should demonstrate independent judgment and initiative only in executing missions already approved by higher authority*, and even in these cases, they should limit their actions to a small range of standard operating procedures. It is important to also note that the theory basically makes no prediction regarding the behavior of senior officers. The Soviet system places them in the position where essentially they alone are able to exercise independent judgment, and encourages them to do so. However, there aren't any structural features that necessarily force them to do so.

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<sup>60</sup> Cordesman and Wagner, p. 209; Donnelly, *Red Banner*, p. 181; and author's interview with Général Bernard Trainor, May 1994.

<sup>61</sup> Cordesman and Wagner, pp. 209-211; Erickson, et. al. *Soviet Ground Forces*, p. 127; Hemsley, p. 68.

<sup>62</sup> Cordesman and Wagner, pp. 107-109; Goldhamer, pp. 135-136; Hemsley, pp. 49-54.

<sup>63</sup> Donnelly, *Red Banner*, p. 224; Erickson, et. al., *Soviet Ground Forces*, p. 141; Goldhamer, pp. 55, 135-138; Wardak, pp. 188-189.



## Creativity and Innovation

As with initiative, we should expect to find that *Arab junior officers are unwilling to adopt creative approaches to military tasks, instead sticking to the tried and true--and officially sanctioned--methods*. Once again, the theory makes no prediction regarding innovativeness among senior officers: the Soviet system encouraged novel approaches to military problems at this level, but did not necessarily compel it in the way that it compelled conformity at junior levels.

## Ad Hoc and Set-Piece Operations

Soviet operations were a unique combination of tremendous rigidity and a large degree of circumscribed flexibility: timing, support and missions were determined by an elaborate planning process, but missions were executed by tactical forces relying on a limited "menu" of possible solutions to every military problem. To the extent that Arab forces rely on Soviet methods, they should be structured accordingly and perform in a similar fashion as the Soviets.

At the broadest levels, there was a fairly set-piece flavor to most Soviet operations. Specifically, all Soviet operations in both attack and defense were planned in great detail, and a huge range of possible contingencies were considered and addressed. For the most part, the Soviet system was set up to implement these highly-structured operations. Thus, *Arab militaries relying on Soviet practices should show a predilection for set-piece operations and should do considerably better in set-piece operations than in completely ad hoc operations*.

Nevertheless, there was also a considerable amount of flexibility in Soviet operations. Soviet commanders did not plan and rehearse their operations down to the last detail. Instead, the Soviet military was purposely designed to conduct ad hoc operations. Only the initial phase of a Soviet offensive was planned in detail, because subsequent operations were fully intended to be developed on the spot in response to the outcome of the initial operations.<sup>64</sup> Soviet commanders, stressing breakthrough battles and deep armored penetrations, fully expected to maneuver their forces based on where enemy resistance was weakest and how best to outflank enemy units. The Soviets recognized that this would require a great deal of improvisation throughout the course of a campaign and, in fact, this was the purpose of trying to maximize the flexibility afforded operational commanders.

The rigidity at tactical levels went only to the *willingness* of commanders to act on their own. Once given orders from above, there was nothing to inhibit a Soviet company, battalion, or regimental commander from executing his assigned tasks; what he was discouraged from doing was disobeying or "reinterpreting" the orders he received. As noted above, Soviet tactical formations had a set repertoire of military skills, but these skills could be employed as needed depending on the whims of the senior leadership. In other words, a Soviet battalion may have had only a few ways to attack an entrenched enemy position, but it was trained to attack *any* entrenched enemy position, whether it was the position it originally was assigned to attack or a different one assigned to it in the midst of battle. Based on these patterns, it should be the case that *Arab tactical commanders simply do not attempt ad hoc operations on their own, but do fine when executing ad hoc operations ordered by their senior commanders*.

## Planning

The Soviets preferred thoroughly planned battles in which every contingency was assessed and planned against--although, as noted above, this planning usually encompassed only the initial breakthrough operation, after which exploitation would be

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<sup>64</sup> HERO, pp. 6-7, 31, 194; Wardak, pp. 170-171, 274.

developed on a mostly ad hoc basis. This was true both on offense and defense. As a result, all Soviet operations demanded extremely elaborate and complex planning. The genius of the Soviet system was its ability to turn these tremendously complex plans into successful military operations conducted by rather unsophisticated tactical formations. In the case of the Arabs then, we should see the same pattern. Thus *Arab armed forces should do well in drawing up elaborate plans and translating those plans into concrete military operations.*

### **Offensive versus Defensive Operations**

Given the Soviet addiction to offensive operations, we should expect to find that *Arab armies focus primarily on attacking.* In combat, they should be constantly trying to set themselves up to go over on to the offensive and should not pass up opportunities to launch an attack when possible. Similarly, the Soviet accent on deep penetration operations should prompt Arab forces to try to drive as far into the adversary's operational depth as possible. In particular, *Arab armies should try to push as far and as fast as they can without stopping or slowing down to regroup.* Indeed, Arab forces should generally fall prey to problems as a result of driving too deep and becoming overextended, rather than failing to drive deep enough to cripple their opponent. By the same token, the concomitant Soviet neglect of the defensive should manifest itself in relatively poor defensive operations. Because Soviet training focuses on conducting attacks and pays relatively little attention to defending, *Arab armies following a Soviet model should be relatively less well-prepared for defensive operations than for offensive operations.*

### **Use of Maneuver**

*Arab armies should try to employ maneuver on a constant basis.* As with the Soviets, we should expect to find that Arab militaries emphasize outflanking and encircling an adversary--even when on the defensive--to secure decisive results.

### **Operational Tempo**

To the extent that they have modelled themselves on the Soviets, *Arab armies should place a premium on rapid operations* to magnify the effects of surprise, maintain the initiative, and prevent the enemy from regrouping. Arab forces should bypass areas of enemy resistance and constantly keep pressing forward to maintain their speed of advance.

### **Combined Arms**

The Soviet armed forces emphasized combined arms coordination at all levels. However, the actual performance of Soviet units in combined arms operations varied. At times, such as at the end of World War II, the Soviets did quite well in integrating armor, artillery, infantry and airpower. At other times, such as the beginning of their involvement in Afghanistan, they did not do quite so well. Indeed, later in Afghanistan they had to employ elite units to ensure proper combined arms coordination. Consequently, *Arab armies should display a constant attention to combined arms operations and efforts to integrate various combat arms down to the lowest levels of the military.* However, with regard to actual performance, the theory predicts only that *Arab armies should have mixed results with combined arms operations.*

### **Surprise: Operational Security and Reconnaissance**

The Soviets believed it crucial to surprise their adversaries and to prevent their adversaries from doing the same to them. Consequently, we should expect *Arab armies to pay the same attention to camouflage concealment and deception--to hinder their opponents from collecting intelligence against them--and on reconnaissance--to ensure that they are fully cognizant of their adversaries' plans, as did the Soviets.*

### **Employment of Armor**

The rigidity of Soviet training and tactical doctrine often left Soviet armored units inflexible and dogmatic in their actions. Soviet armor tactics, especially those of earlier generations, treated tanks primarily as mobile cannon, and so tank tactics were simple and direct. Armor generally attacked in waves, hoping to batter through defenses with concentrated firepower, rather than "outfighting" an opponent in tank duels. Consequently, *Arab units should employ armor poorly.*

### **Employment of Artillery**

The experience of Soviet artillery forces was somewhat more complicated. The Soviets constantly stressed the importance of artillery as a means of massing firepower, and normally did an excellent job of concentrating artillery against key sectors, but the actual performance of Soviet artillery units was mostly poor. The Soviets demonstrated a superb capability to coordinate complex bombardments, especially when batteries could be pre-registered and fire plans developed at length beforehand, but Soviet artillery units had difficulty shifting fire to adjust to changing battlefield conditions or attempting to conduct complicated missions such as counter-battery fire. Consequently, we should expect *Arab artillery units to fare poorly except when acting as part of a set-piece operation.*

### **Air-to-Air Combat**

Soviet counter-air operations were hindered by the rigidity of their training and their command and control system. In particular, Soviet fighter operations were generally characterized by a strict reliance on Ground-Controlled Intercept (GCI) direction. This tendency generally left pilots relying on Soviet-style air operations poor dog-fighters.<sup>65</sup> Consequently, *Arab air forces using Soviet methods should fare poorly in air-to-air combat.* Nevertheless, as a result of the strong Soviet belief in the importance of attaining air superiority--or at least denying it to an adversary--we should expect *Arab air forces to make every effort to gain air superiority or at least contest the air space over their ground forces.*

### **Air-to-Ground Operations**

Given the various characteristic features of Soviet air-to-ground operations, there are four predictions we can infer regarding Arab air-to-ground operations. First, they

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<sup>65</sup> A dissenting opinion is voiced by Alexander Zuyev, the Soviet MiG-29 pilot who defected to Turkey in 1990. Zuyev argues that at least by the mid to late 1980s, Soviet fighter doctrine was not as inflexible as Western experts believed. Zuyev's description both of the training practices of his unit as well as their expected operations in wartime suggest that Soviet fighters would not have been heavily dependent on GCI and could have been expected to show imagination and aggressiveness in combat. While Zuyev's credibility is highly suspect, his description in improvements in Soviet fighter doctrine echo rumors that have reached the West since the collapse of the Soviet Union. Indeed, beginning in the late 1970s and early 1980s, Soviet military theorists apparently began to recognize that future battles would likely demand decentralized authority and thus the traditional Soviet predilection for obedient tactical commanders could be a severe handicap. This thinking was reinforced by the Soviet experience in Afghanistan, the Soviets were forced to rely on small, independent forces to combat the Mujahideen--a pattern that severely taxed the Soviet command and control system. Zuyev's comments indicate that by the late 1980s, the Soviets had taken these lessons to heart and were attempting to introduce appropriate changes into their forces.

Interesting though all this may be, it is essentially irrelevant to the issue of Soviet influence on the Arabs. The height of Soviet influence on Arab militaries came in the 1960s and early 1970s, well before any of these reforms had taken hold in the USSR. Soviet influence declined noticeably in the region thereafter. On the issue of the reform of Soviet practices see, Cordesman and Wagner, pp. 116-117; Donnelly, *Red Banner*, pp. 282-284; Miller, pp. 447-484; and Alexander Zuyev with Malcom McConnell, *Fulcrum*, (NY: Warner Books, 1992).

should be fairly *inflexible and unimaginative, relying on quantity rather than quality* to have an effect on their targets. Second, they should *focus heavily on providing immediate support to the ground forces*, concentrating on CAS and BAI missions to the exclusion of strategic airstrikes and "deep" interdiction. Third, they should be controlled by higher echelon ground commanders, planned by high-level command staffs with little room for change, and thus should be *relatively unresponsive to the immediate needs of tactical commanders*. Finally, because of the importance the Soviets attach to providing air support to their ground forces, *Arab air forces should invest a great deal of time and effort into air-to-ground operations*.

### **Logistics**

Soviet logistics were not spectacular, but they were effective and always more than adequate. In particular, the "push" system developed by the Russians is designed to maximize the ability of units to fight and move without being forced to rein in operations to resupply. Consequently, we should expect *Arab armies to be adequately supplied during their operations and, in particular, we should expect to find that their operations are rarely delayed by their logistical system*.

### **Maintenance and Repair**

The Soviet emphasis on mechanization and superior numbers of weapons should also produce high operational readiness rates, but not necessarily good maintenance and repair capabilities. Soviet forces favored replacement rather than reconstitution of units, hence their repair assets were concentrated at army and front levels and combat units were not expected to perform more than the most basic repairs. Moreover, the Soviets maintained high operational readiness rates among their first-line field units by keeping their combat equipment in storage and having them use only a part of that equipment--or older models--for day-to-day training. Armies adhering to Soviet models should be expected to evince the same patterns. Thus *Arab armies and air forces should boast reasonably good operational readiness rates by limiting the peacetime wear and tear on their equipment*. By contrast, *Arab combat units should have very limited repair capabilities and should be dependent on higher echelon depots*.

In addition, because of their limited maintenance capabilities--and the actual design criteria of the equipment--Soviet armored vehicles and other major military systems tended to suffer from widespread mechanical breakdowns after only a few days in combat. The Soviets consciously traded-off sustainability in favor of greater ease of use and combat power. This was a logical decision because, as noted above, they expected to replace entire units in combat after a few days. Consequently, it did not matter whether a regiment needed to be withdrawn from the line because its vehicles were destroyed or because they were broken down: the net effect was the same. For other armies relying on a Soviet system, this suggests that units that survive in combat for more than three or four days without being replaced should begin to suffer large-scale mechanical breakdowns.

### **Replacement and Reconstitution**

Just as Soviet commanders emphasized the replacement of combat units, rather than their sustainment in combat, so too should *Arab commanders be willing to take large numbers of casualties to achieve a goal*. In general, they should put the success of the mission above considerations of losses.

### **Engineers**

The Soviets considered engineers to be an important element of a combined arms team, and crucial to ensuring the rapid advance of their armored forces. For these reasons, the Soviets put considerable effort into building an effective military engineering capability. Therefore, we should expect *Arab armies to likewise have at least adequate*

*engineers and to integrate engineers into their combined arms teams.*

### **Technical Support to Military Operations**

*Like their Soviet mentors, we should expect to find that Arab militaries rely heavily on systems analysis and statistical methods in devising their strategies. Similarly, we should expect them to try to employ technical solutions to military problems and to stress the importance of technical abilities among their personnel.*

### **Additional Predictions of the Theory**

There are two more predictions of the theory that Arab military problems are derived from their adherence to Soviet military practices. First, the Soviet-model theory makes a large number of predictions about things that the Arabs should do well, in addition to the things that the Arabs should do poorly. Second, the theory predicts that only Arab states that relied on the Soviet model should experience these difficulties and only while relying on Soviet practices.

### **Positive and Negative Predictions**

Despite the claims of many authors writing on the Middle East and making off-hand reference to the impact of Soviet methods, the Soviet-model theory actually makes a sizeable number of positive predictions. This is a fairly obvious outcome when one distances oneself from the specific Middle East context. The Soviets have been able to generate very significant military power over the course of the twentieth century. The Red Army really deserves the credit for defeating the Wehrmacht during World War II, as the Russian front regularly claimed three-quarters or more of all German divisions at all times. Moreover, superior numbers clearly cannot be the reason for this triumph because the Soviets badly outnumbered the Germans in divisions, artillery, and tanks right from the start; without doubt, some increase in skill was a major element of the Soviet victory. Similarly, all throughout the Cold War, many intelligent Western defense analysts were positively terrified by Soviet conventional capabilities, and here again, it was more than just superior Soviet force, it was also the ability of the Soviets to skillfully employ that force.

Clearly then, the Soviet "style" of war had its strengths as well as its weaknesses. Of greatest importance for my study, these strengths should be manifest in Arab military performance. If the problem is the Soviet system, then we should expect to find that the Arabs perform almost exactly like the Soviets--manifesting both their strengths and weaknesses--and that the reason for the Arabs' defeats are that, for some reason, either the Soviet weaknesses are magnified or their strengths are obviated, or both. However, the theory would be disconfirmed if the Arabs were to manifest only the Soviet weaknesses as this would indicate that the problem was something about the Arabs, and not the Soviet system *per se*.

### **Which Arab States Adopted the Soviet Model?**

The central prediction of the Soviet-model theory is that Arab military effectiveness should fluctuate with the influence of Soviet military methods over the different Arab states. As Soviet influence grows over an Arab military, the combat effectiveness of that military should decline in a corresponding fashion. Likewise, as the Soviet influence abates, military effectiveness should increase. Moreover, the theory predicts that Arab states that employ a Soviet model of military operations should perform worse than Arab states that do not. If any of these predictions were to prove untrue, then the theory would be disconfirmed. In addition, if it proved to be the case that the strengths of the Soviet system seemed to help an Arab military more than its

weaknesses hurt that military, the theory would also fail. Ultimately, the Soviet-model theory is an attempt to explain the generally poor performance of Arab armed forces in combat since 1945, and if the theory ends up explaining those areas of strength the Arabs have shown, it will have added to our understanding of Arab military effectiveness, but not to our understanding of the sources of Arab military difficulties. Finally, the theory predicts that non-Arab militaries that employ Soviet practices should experience the exact same problems as the Arabs. After all, if it is the Soviet system that is to blame and not something unique to the Arabs, then other countries relying on the Soviet system should have the same difficulties.

Not all Arab armies have relied on Soviet military systems. Of the 27 different Arab militaries that fought in the 16 Middle East wars I examined, only ten adhered to Soviet doctrine to any significant degree. (See Table 4a, below) Moreover, of those ten militaries, five were the Syrian militaries that fought in the 1967, 1970, 1973, 1975 and 1982 conflicts, and another three were the Egyptian militaries that fought in 1967, 1967-70, and 1973. There have been other Arab militaries that had some Soviet influence, but in these cases, Soviet practices were so slight that they cannot be held responsible for the military's performance, good or bad. For example, in 1956 the Egyptian army had only just come under Soviet tutelage and the various training programs were only just getting under way. Thus, in the 1956 war the Egyptian Army was still almost wholly reliant on British doctrine. Likewise, beginning in the late 1950s and 1960s, the Iraqis received considerable military assistance from the Soviets, but for reasons of their own, the Iraqis never really adopted Soviet methods except in certain areas, such as logistics. Even at the time of the 1973 October War, when Soviet influence in Iraq was greatest, Iraqi doctrine was overwhelmingly British, with some French and indigenous elements.<sup>66</sup>

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<sup>66</sup> There is a widely held misconception in the West that Iraq relies heavily on Soviet doctrine and methods. This is entirely untrue. The Iraqi armed forces were initially formed and trained by the British during the colonial period. Iraq retained a pure British military model until the 1950s when it began to incorporate a small number of Soviet practices in certain areas. However, after the abysmal performance of Iraqi forces in the 1973 October War, Baghdad reshaped its doctrine to correct glaring mistakes and abandoned some of the Soviet practices they had previously employed. This process was further accelerated during the war against the Kurds in the mid-1970s and the Iran-Iraq War. During these conflicts, Iraqi doctrine continued to be largely based on the old British model, but it increasingly included indigenous methods developed to counter Kurdish and Iranian tactics. By the end of the Iran-Iraq war, Iraqi doctrine contained very little recognizable elements of the Soviet style. Indeed, US military personnel who have examined the enormous number of Iraqi manuals written during the Iran-Iraq War and captured by US military personnel during the Gulf War unanimously maintain that Iraqi doctrine relied overwhelmingly on British methods, coupled with a strong dose of indigenously developed techniques. Only equipment manuals dealing with Soviet-made weapons retained any Soviet flavor. See, Christopher Bellamy, *Expert Witness: A Defence Correspondent's Gulf War, 1990-1991*, (London: Brassey's, 1993), p. 7; Belzyudnyy, p. 62; Blackwell, pp.46-66; Cordesman, *After the Storm*, pp. 429-433; Cordesman and Wagner, *The Iran Iraq War*, pp. 60 and 420; Friedman, pp. 24-27, and 270; Marr, pp. 95-210; NTC, *The Iraqi Army*, pp. 1, 102-119; O'Ballance, *The Gulf War*, pp. 162-213; Tzvi Ofer ed., *The Iraqi Army in the Yom Kippur War*, translated by "Hatzav," (Tel Aviv: Marakhot, 1986), pp. 7-12; Brig. General Robert H. Scales, Jr., *Certain Victory*, (Washington, DC: Office of the Chief of Staff, US Army, 1993), pp. 113, 235-236; William O. Staudenmaier, *A Strategic Analysis of the Gulf War*, (Carlisle Barracks, PA: Strategic Studies Institute, US Army War College, Jan 1982), p. 6; Wagner 63-70; Watson et. al., pp. 169-170; and author's interviews with US military personnel, December, 1993.

**Table 4a: Arab Armed Forces Relying on Soviet Military Systems in Selected Middle Eastern Wars**

Wars	Egypt	Iraq	Jordan	Saudi Arabia	Syria
War of Israeli Independence, 1948	Nil	Nil	Nil	-	Nil
Sinai-Suez War, 1956	Minimal	-	-	-	-
Egyptian Intervention in Yemen, 1962-1967	Minimal	-	-	-	-
First Iraqi-Kurdish War, 1961-1970	-	Minimal	-	-	-
Jordanian-Israeli Clashes 1956-1967	-	-	Nil	-	-
Six-Day War, 1967	Some	-	Nil	-	Some
War of Attrition, 1967-1970	High	-	-	-	-
Jordan-Israel Clashes, 1967-1970	-	-	Nil	-	-
Syrian Invasion of Jordan, 1970	-	-	Nil	-	High
October War, 1973	High	Some	Nil	-	High
Second Iraqi-Kurdish War, 1974-1975	-	Some	-	-	-
Syrian Invasion of Lebanon, 1975	-	-	-	-	High
Iran-Iraq War, 1980-1988	-	Minimal	-	-	-
Israeli Invasion of Lebanon, 1982	-	-	-	-	High
Iraqi Invasion of Kuwait, 1990	-	Minimal	-	-	-
Gulf War, 1991	Minimal	Minimal	-	Nil	-

**Key:**

High = Soviet methods played a very significant role in the armed forces' operational doctrine during the particular war.

Some = Soviet methods shaped the armed forces' operational doctrine during the particular war to some extent, but the Soviet model did not dominate their operations.

Minimal = Soviet methods played only a very marginal role in the armed forces' operational doctrine during the particular war.

Nil = Nation did not rely on Soviet-style military system at all during the particular war.

- = Nation did not participate significantly in the particular war.





## Chapter 5

### A Theory of the Influence of Underdevelopment on Arab Military Effectiveness

The last alternative explanation I consider is the theory that Arab military ineffectiveness since the Second World War is the product of the chronic underdevelopment of the Arab world during this period. There is a persistent belief among many Westerners that Third World nations simply cannot generate military power to the same extent that advanced industrial societies can. In other words, given the same resource base, an advanced industrial society is very likely to be able to generate significantly greater military power than a Third World country. Thus the theory claims that only advanced industrial societies can achieve high levels of military effectiveness on the modern battlefield, and therefore the problems besetting the Arab states are a function of "backwardness."

The differences between developed and underdeveloped societies are important for military considerations for a variety of reasons. First, any number of obvious historical examples suggest a broad connection between economic development and war: for instance, the Zulu were a feared military power among the tribes of South Africa, but were literally blown away by much smaller British armies.<sup>1</sup> Although by the same token, it is hardly clear that economics is deterministic of military power: witness the Roman empire conquered by Germanic tribes centuries--if not millennia--behind in economic development.<sup>2</sup> Second, as Paul Kennedy has argued, because the advanced powers have learned to wage war in a manner that leans heavily on their productive capacity, "modern" warfare is, in a sense, *industrial* warfare.<sup>3</sup> Thus, it is reasonable to expect that a society that has not experienced industrialization will have difficulty waging warfare in the manner developed by industrial societies to take advantage of the various facets of industrialization. At the very least, it would seem plausible that pre-industrial states would have greater difficulty engaging in this type of warfare than would industrial states.

#### Derivation of the Theory

Unfortunately, once past the general idea that underdevelopment hinders military effectiveness, there is little to draw on to flesh out a real theory that can be held up against the light of history to determine whether the idea has validity. Most of the

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<sup>1</sup> On the relationship between military power and economic development, see in particular, Paul M. Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*, (NY: Random House, 1987), and Robert Gilpin, *War and Change in World Politics*, (Harvard University Press, 1981).

<sup>2</sup> This example points out a problem in Gilpin's explanation of the rise and fall of empires which is founded almost wholly on economic determinism. See Gilpin, chapters 2-4.

<sup>3</sup> Kennedy, *Op. cit.* At present, only two nations in the world have shown even an early capability of waging what might be called post-industrial warfare, namely the US and Israel. The Israelis in Lebanon in 1982 and the United States in the Gulf War in 1990-1991 demonstrated that they are beginning to take advantage of the technologies emerging from post-industrial, "information" economies.

statements made by authors ascribing poor Arab military performances to underdevelopment consist of little more than off-hand remarks along the lines of, "Of course, no Third World military is capable of doing (fill-in-the-relevant-combat-operation)." As a result, I have had to piece this theory together from alternative sources.

Although numerous authors have begun with the proposition that economic practices create incentive structures that teach, or simply promote, different kinds of behavior among individuals, I found little previous work that could be used to extrapolate a plausible theory of how the absence of industrialization has prevented Arab militaries from performing well in combat. For example, modernization theory attempts to ascribe certain patterns of behavior to the impact of industrialization and therefore it would seem like a reasonable place to start building a theory of how industrialization might shape combat performance. Unfortunately, much of the early modernization theory writings were ultimately derived from a simplistic extrapolation of Marxian theory that is deductively unsound and empirically insupportable.<sup>4</sup> In particular, early modernization theory consistently stumbled over the hurdle of culture, which it could neither explain nor dismiss. I felt it inappropriate to rely on the works of early modernization theorists such as Daniel Lerner, for instance, for the simple reason that they generally do not make a terribly compelling argument. Continuing with the same example, Lerner's work focuses on the concept of "empathy" which he argues is the ability of individuals to identify with, adapt to, and accept new environments and people, and which he argues is caused by economic change.<sup>5</sup> Unfortunately, Lerner's own empirical work clearly demonstrates that the phenomenon of "empathy" must precede economic development, rather than being its product.<sup>6</sup> Thus, I felt that a theory of the impact of underdevelopment on Arab military effectiveness extrapolated from early modernization theory would prove to be a straw man, offering little explanation for Arab military difficulties and easily disproved when put to the test.

Most of the more recent literature on modernization theory was also inappropriate for this role specifically because it has tried to take into account the problems with culture that earlier theories encountered.<sup>7</sup> Much of the work done by social scientists still working in the modernization tradition specifically addresses the interrelationship of culture and economics, and the powerful impact of culture on development. For instance, *Becoming Modern*, by Alex Inkeles and David Smith, concludes by reconciling culture and industrialization and by forcefully asserting the importance of cultural change in

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<sup>4</sup> For a superb discussion of problems with modernization theory, see Louay M. Safi, *The Challenge of Modernity: The Quest for Authenticity in the Arab World*, (Lanham, MD: University Press of America, 1994), chapters 1-4.

<sup>5</sup> Daniel Lerner, *The Passing of Traditional Society: Modernizing the Middle East*, (London: The Free Press of Glencoe, 1958), p. 49.

<sup>6</sup> Lerner, pp. 71-72. On these pages, Lerner presents what he believes is the crucial support for his argument: a table in which he ranks respondents to his survey on a scale of traditionalism versus modernity, and then compares this with their scores in terms of four "features" of modernity: literacy, urbanism, media participation, and empathy. Lerner tries to demonstrate that the modern person is urban, literate, exposed to the mass media, and "empathic," while the traditional person is none of the above. The crucial flaw in Lerner's work is that the first move on his chart, the feature distinguishing completely traditional people from those beginning the transition from traditionalism to modernity is the presence of empathy. Thus, Lerner's work shows that empathy must *precede* modernity, rather than being its capstone. Lerner's theory predicts that empathy should be the last trait acquired by the modern man and therefore should be present only in those who he scored as the most modern. As it is, Lerner demonstrates that the first crucial step on the road to "modernity" is the development of "empathy"--a cultural-behavioral change. Clearly then, economic development cannot be causing a change in culture, rather it is a change in culture that is allowing or causing the economic changes.

<sup>7</sup> For an excellent review of the modernization school literature, see Ali Banuazizi, "Social Psychological Approaches to Political Development," in Myron Weiner and Samuel P. Huntington, eds., *Understanding Political Development*, (Boston: Little, Brown and Co., 1987), pp. 281-316.

paving the way for economic change.<sup>8</sup> Because works such as *Becoming Modern* address both culture *and* development, it would be unfair to the underdevelopment theory (and to the various authors) to caricature their work as presenting a theory that claimed that behavior was shaped by economics alone, without the context of culture.<sup>9</sup>

Although the existing literature fails to provide a full-blown theory that adequately explains patterns of behavior as a result of industrialization (at least one divorced from culture), the notion that military performance may be a result of economic development is still a plausible explanation for Arab military ineffectiveness since 1945. Consequently, I have attempted to piece together such a theory from a variety of sources. The result is a theory that I believe is both deductively plausible and compelling in providing a reasonable argument as to the likely impact of underdevelopment on Arab military effectiveness.<sup>10</sup>

### **Culture and Underdevelopment**

As the later modernization theorists have observed, culture and economic development are not completely distinct topics. In actuality, there is a high degree of interaction between these two phenomena. Cultural values and behavioral patterns play a considerable role in shaping a country's economic development. Likewise, a society's economic system is an important influence on its culture. Consequently, each has a powerful impact on the other, and it is difficult to disentangle the two. Indeed, even where it is possible to ascribe a particular pattern of activity to one variable over the other, it may be the case that the other variable is still exerting an indirect influence. Therefore, it is important to keep in mind that during the period 1945-1991 Arab culture shaped the course of Arab economic development, just as changes in the Arab economy exerted an influence on Arab cultural patterns.

For analytic purposes, I have been forced to separate culture and economic development to artificially. Since culture and economic development are ultimately different phenomenon, it is entirely possible that one had a greater impact on Arab military effectiveness than the other. However, to be able to employ social science methodology to determine their differing influences on Arab military effectiveness, it is necessary to treat each as a discrete variable. Quite obviously, this creates serious problems because the two are not really discrete variables, and doing so hides the interactive effects of the two phenomena.

While this separation is unfortunate, I do not believe it to have been excessively harmful and I have made every effort to address problems created by this artificial distinction. First, in my conclusions, I specifically address the interactive effects of culture and economic development to try to reintegrate these two variables into a more realistic framework for assessing the various influences on Arab military effectiveness. Second, during periods of rapid economic change the differing influences of cultural and economic systems are far more readily apparent. Culture and economic development interact heavily, but they are not the same thing. They operate in separate realms and their effects on human behavior can be distinguished. It is possible to say that a particular set of incentives on a people's behavior derive more from the specifics of an economic system than their culture, or vice versa. This is especially true when a society's economic system is in transition, as was the case for the Arab world between 1945 and

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<sup>8</sup> Alex Inkeles and David H. Smith, *Becoming Modern: Individual Change in Six Developing Countries*, (Cambridge: Harvard University Press, 1974), pp. 314-315. Also see David E. Apter, *The Politics of Modernization*, (Chicago: University of Chicago Press, 1965), pp. 57-59, 69-71, 81-83, 86-120, 154-156.

<sup>9</sup> Indeed, I return to the interrelationship of culture and economics and recent work in modernization theory in chapter 16 below.

<sup>10</sup> I am deeply indebted to Samuel P. Huntington for his thoughts on the relationship of industrialization to military performance. Conversations with Professor Huntington in November 1994 and January 1995 formed the basis for much of what follows.

1991. During periods of economic change, the society will react both to new incentives from the new economic system and older incentives from the existing cultural system. This is because cultural systems change slowly--slower than the pace of industrial development--and so the new economic incentives take time before they are woven into the fabric of the society's culture. Because the postwar Arab world had begun to undergo an economic transformation which its culture lagged, the impacts of these two phenomenon were far more different than would otherwise be the case. Thus, the degree of overlap between culture and economic development was at a very low level during the period of my study.

### **The Underdevelopment of the Arab World**

There can be little argument that all of the Arab states, even the oil-rich shaykhdoms of the Arabian peninsula, are underdeveloped in the sense of being pre-industrial. Tables 5a and 5b below summarize some relevant economic statistics for the five Arab states whose military performance I examined. The tables provide a snapshot of the economies of these states in 1960 and 1990. I had hoped to provide figures for 1950 rather than 1960 so as to show the relevant figures for the beginning and end of the period I consider (namely 1945-1991) but the Middle East was so underdeveloped in 1950 that there are virtually no reliable statistics in Western, Arab, or international sources. Consequently, 1960 was as early as I could get. Also, I have included the same statistics for Sweden at both points in time to allow for some comparison between the Arab states and a modern, industrial society. The comparison clearly illustrates the vast differences separating the advanced industrial nations and the Arab states.

Although per capita GNP is the traditional measure of socio-economic development, in the case of the Arab states, this statistic can be somewhat misleading. As the two tables demonstrate, the oil wealth of Saudi Arabia and the other Gulf states creates enormous GNP per capita, but these states are not necessarily any more developed than the rest of the Arab world. Although per capita GNP is higher for Saudi Arabia than it is for Egypt, Iraq, Jordan, and Syria, the other statistics for Saudi Arabia are in the same range as those of the other four Arab states. This is because oil wealth has distorted the economies of the oil producing states, bringing enormous wealth but, so far, producing little economic development. Consequently, in assessing levels of socio-economic development, one cannot look only at per capita GNP, but must also examine other indicators such as those relating to health, education, economic structure, and patterns of living characteristic of the society. Based on these various measures, all of the Arab states fall into the realm of underdeveloped nations and, if the theory is correct, should suffer from the problems of military effectiveness that accompany low socio-economic development.

### **Underdevelopment and Military Effectiveness**

It is important to remember that the effects of underdevelopment represent only *relative* disadvantages of the pre-industrial societies when compared to the advanced industrial states. The concept of underdevelopment refers to the absence of something--industrialization. An underdeveloped society is one whose economy has not undergone the process of industrialization, with all that entails. Consequently, underdevelopment can only be said to hinder anything *in relation to industrialized states*. Compared to France during the Middle Ages or Britain during the Renaissance, even as poor a country as present day India would seem an economic superpower, and thus the theory would predict that contemporary India ought to have significant advantages over the militaries of medieval France and Elizabethan England.

**Table 5a: Socio-Economic Development of Selected Arab Countries and Sweden in 1960**

Indicators for 1960	Egypt	Iraq	Jordan	Saudi Arabia	Syria	Sweden
GDP per Capita, in 1960 dollars (1990 dollars)	149 (642)	239 (1,030)	NA	NA	198 (853)	1,885 (8,126)
Literacy (% of pop. over 15 able to read +write)	26	15	32	3	36	99
Infant mortality per 1,000 live births	128	140	140	190	130	17
Life expectancy at birth, in yrs	51	46	47	43	50	74
Per capita steel consumption	13	33	> 5	10	23	545
% of work force in agriculture	58	53	44	72	54	14
Inhabitants per physician	2,500	4,900	5,900	13,000	5,200	730
Inhabitants per automobile	386	168	262	NA	273	7
Inhabitants per telephone	106	122	67	189	90	3

**Table 5b. Socio-Economic Development of Selected Arab States and Sweden in 1990**

Indicators for 1990	Egypt	Iraq	Jordan	Saudi Arabia	Syria	Sweden
GDP per Capita, in 1990 dollars	720	1,940	1,100	5,800	2,300	26,524
Literacy (% of pop. over 15 able to read +write)	48	60	80	62	64	99
Infant mortality per 1,000 live births	80	84	38	59	45	5
Life expectancy at birth, in yrs	61	63	69	68	67	78
Per capita steel consumption	48	88	98	233	15	421
% of work force in agriculture	34	30	20	16	32	3
Inhabitants per physician	1,320	1,740*	770	700	1,160	370
Inhabitants per automobile	54	27	21	12	109	2.4
Inhabitants per telephone	25	28	44	10	27	1

\* For Iraq, the number of inhabitants per physician is the 1984 figure as this is the latest available.

Sources: CIA, *The World Factbook*, 1992; The World Bank, *World Development Report*, 1960, 1961, 1990-94; United Nations *Statistical Yearbook*, 1960, 1961, 1962, 1988, 1990, 1991; *Europa World Yearbook*, 1960, 1961, 1990, 1991.

Perhaps the most obvious effect of underdevelopment is its impact on health and nutrition. Pre-industrial societies generally do not have the same kind of access to the various products of industrialization that have improved nutrition across the board for industrial societies as well as the vast array of medicines and treatments that have greatly improved health care in the advanced countries. Preservation, sterilization, and vitamin fortification of foods (as well as fluoridation of water); more extensive sanitary and waste disposal procedures; and the greater availability of adequate food, water and shelter have led to dramatic differences between industrial and pre-industrial societies, who can obtain these advantages only through trade with (or charity from) the advanced states. While this gap is still readily apparent today, it was even more pronounced as little as twenty years ago. For example, while in 1990 the infant mortality rate for the forty poorest countries was 71 per thousand and for the twenty-one wealthiest was 8, in 1970 the respective figures stood at 109 and 20 respectively.<sup>11</sup> Likewise the success of industrial societies in determining the causes of illnesses, the means of treating those illnesses, and the greater division of labor in the advanced states that has resulted in a far larger number of physicians and nurses relative to the overall population, have similarly diminished the toll of disease, injury, and even aging on their citizens. Thus in 1991 citizens of the most advanced states could expect to live to be 77 on average, while the people of the poorest states generally could only expect to reach 62 years of age.

For the militaries of underdeveloped states, these health and nutrition standards affect the pool of available manpower upon which the armed forces can draw for its soldiers and officers. Socio-economic development, by shaping the general health and nutrition of the population, determines the "fitness" of the eligible male population for military service. Countries with poor health and nutritional standards produce larger numbers of people with mental or physical disabilities that preclude them from military service. Although this point may seem minor, it plays a significant role in the developing world. As of 1992, in most Arab countries only about 55-65 percent of males age 15-49 were mentally and physically fit to serve in their armies.<sup>12</sup>

There is a well-established correlation between socio-economic development and education. Richer societies are better able to provide for public education both in terms of the money needed and the personnel available to serve as teachers. In addition, richer societies usually have a greater division of labor, making it easier for children to be excused from labor and given the time to go to school. Education is an extremely useful quality for officers and soldiers. At the most basic level, a populace with little education is likely to manifest very high rates of illiteracy.<sup>13</sup> The ability to read is a crucial skill for officers and a highly useful one for soldiers. An inability to read makes it difficult for the military to train its personnel in needed skills because the troops must be taught everything by another person. Illiterate personnel cannot be expected to pick things up on their own by reading manuals, nor can they be expected to improve their skills by reading accounts of the methods of other militaries either past or present. It also becomes difficult for a military to standardize knowledge and ensure that this knowledge is disseminated to all who need it. Since the military cannot disseminate the information in written form, instead it must rely on passing the knowledge by word of mouth from one person--who developed the idea or who was able to read it--to a group of instructors who will teach the men who need it, or in a big military, will teach other men who will then

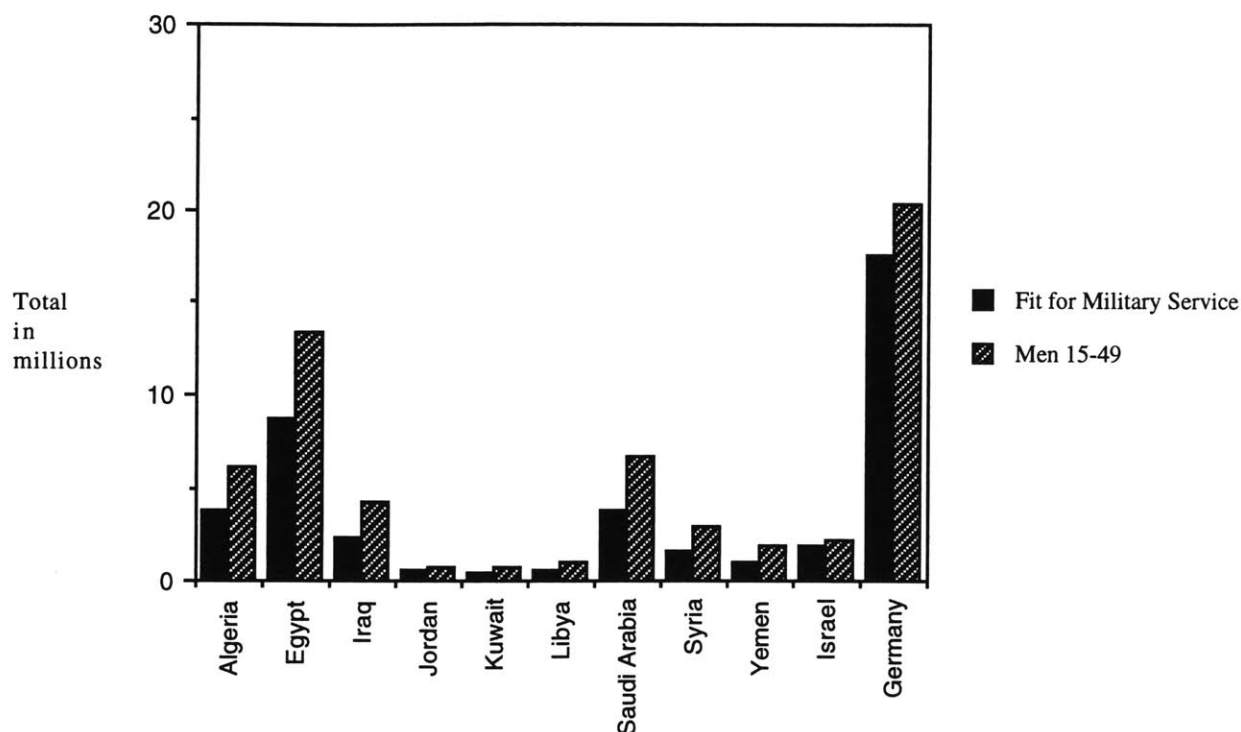
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<sup>11</sup> The World Bank, *World Development Report for 1993*, (NY: Oxford University Press, 1993), pp. 292-3.

<sup>12</sup> Based on peace-time standards. It is reasonable to assume that in wartime these standards might be relaxed. CIA, *World Factbook*, (Washington, D.C: CIA, 1992).

<sup>13</sup> Since the late 1950s, literacy rates in the Arab world have been sufficiently high that literacy has not been a major concern among the officer corps. However, to this day, large numbers of illiterate enlisted personnel have been a constant problem for Arab armed forces. Consequently, many of the points raised here regarding the impact of illiteracy on military performance should, for the Arab world, be considered primarily as affecting the enlisted ranks.

### Men Fit for Military Service in Selected Arab Countries, 1992



teach the officers and soldiers who need the information. Anyone who has played the child's game "operator" knows the potential for mistakes inherent in this system.

Illiteracy can hinder military operations in other ways. Orders cannot always be transmitted or disseminated in writing. Instead, personal or electronic communication is necessary, creating the potential for miscommunication or electronic eavesdropping by the adversary. As with training, the limits involved in providing written orders also increases the likelihood that orders will not be issued uniformly to all taking part in the operation, thereby creating the potential for confusion. Running a logistics system for a sizable, modern army with illiterate personnel is almost unthinkable: how can inventories be tracked and supplies requisitioned? In addition, illiteracy can hinder the ability of military units to act effectively and efficiently in a variety of smaller, but still important ways. For instance, map-reading is a critical skill in military operations and illiteracy normally makes map-reading difficult if not impossible. Similarly, in the course of military operations, soldiers are likely to come across writing in a wide variety of venues such as street signs, captured enemy documents, weapons and equipment instructions, and clues as to the location of food, fuel, and other supplies. An inability to read makes it difficult for any soldier to take advantage of these things.<sup>14</sup>

In addition, at least a limited degree of education is needed to be able to handle high-technology equipment. Beginning in the First World War, military operations have become increasingly dependent on machinery. In recent decades, the complexity of these machines has grown astronomically. While many systems are still relatively simple to employ, and others are so "smart" that even complete idiots can use them, many of the most sophisticated weapons available in modern arsenals require some basic

<sup>14</sup> Of course, an inability to read may also mean that a soldier will be less susceptible to enemy disinformation, propaganda, psychological warfare, and deception.

understanding of the scientific principles behind them. For example, modern fighter pilots generally benefit from at least a basic understanding of the various physical principles involved in flight. While it is almost certainly the case that a totally uneducated person could be taught to fly a fifth-generation jet fighter, and perhaps even use it to fire weapons, his ability to employ the aircraft as a combat system will be extremely limited. There is much more to being a fighter pilot than an understanding of physics, but understanding physics makes it more likely that a pilot will be able to employ his plane to the full extent of its capabilities.

This last point brings up another element of underdevelopment that can also greatly hinder military effectiveness, namely the limited familiarity with machinery of most personnel in underdeveloped nations. Industrial societies have far more machinery, and it is much more a part of everyday life. Tables 5a and 5b above give some indication of the differences in the ubiquity of machines in day-to-day existence in industrial societies as opposed to that of underdeveloped states. In 1960 there was a car for every seven Swedes, while there was only one car for every 168 Iraqis--and Iraq was the best off of the Arab states at that time. In 1990, the ratio of telephones to people in Sweden was one-to-one while even in oil-rich Saudi Arabia the corresponding figure was twelve times higher.

Familiarity with machines means greater ease in employing them and working in conjunction with them. Those who have only rarely come in contact with machinery are unlikely to be able to operate them and may well resist employing them. Even personnel taught to use a particular piece of machinery are unlikely to get the maximum utility out of the equipment if they are unfamiliar with machines in general: such personnel probably will lack an appreciation of how machines work, what they need to function properly, and how to avoid breaking them. For example, conscripts from the central Asian republics of the Soviet Union were generally afraid to fire standard Soviet infantry weapons like heavy machine guns and grenade launchers. Similarly, officers from these areas frequently refused to employ Soviet automated command and communications systems.<sup>15</sup> Alexander Zuyev, the Soviet MiG-29 pilot who defected in 1990 had this to say about Soviet maintenance personnel:

*Kolkhozniki* with the cow manure of the state farms still wet on their boots could not be expected to repair radars and fire-control computers like their American counterparts, who had grown up with their own cars and--we heard on the Voice of America--their own home computers. Instead, we relied on a small cadre of professional maintenance officers trained in academies supplemented by *praporschiki*, warrant officers who could keep the conscript mechanics from destroying the planes.<sup>16</sup>

Industrialization also demands a different sense of time. It demands a different pace. Essentially, it demands a mechanical pace, in the sense of one set by machines and responsive to the needs, limitations, and capabilities of machines. At the most basic level, it requires a sense of precision and alacrity that other economic systems do not. This is not to say that time is unimportant to agrarian, maritime, nomadic or other societies. Clearly time is important for them as well. For example, in an agrarian society, one must plant in spring, harvest in fall, and tend the crops regularly in between, and this is only the most obvious influence of time. However, considerations of time in an agrarian society lack the precision and pace of industrial society. Agriculture demands that time be measured in months, weeks or, at most days. While every farmer may try to

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<sup>15</sup> Herbert Goldhamer, *The Soviet Soldier: Soviet Military Management at the Troop Level*, (NY: Crane, Russak and Co. Inc., 1975), p. 323.

<sup>16</sup> Alexander Zuyev with Malcolm McConnell, *Fulcrum*, (NY: Warner Books, 1992), pp. 144-145.



time things perfectly, it is almost impossible to narrow the optimal time for an agricultural activity beyond a particular week, or possibly a specific day. Moreover, the marginal benefits of hitting the perfect day as opposed to one day earlier or one day later are slight. While failing to plant or harvest for several weeks can be disastrous, it is exceptional that being off by a day or two will prove catastrophic. Likewise, it is almost impossible to measure the factors relating to timing in agriculture more precisely than on a weekly basis: likely condensation, temperature, the state of the ground, etc., are all important for agriculture but are very difficult to measure precisely enough to calculate the optimal time for a given activity beyond weeks or (in rare circumstances) days.

By contrast, industrial society has both the means and the need for greater precision and a faster pace. Machines are capable of precise measurements, regular activities, and constant repetition. As a result, it is entirely possible to calculate the optimum timing for an activity down to the minute or even the second. Moreover, because machines can perform tasks much faster than a person, it is possible to do far more in a given amount of time, or to perform any single action much faster than would otherwise be the case. Finally, because most machines are limited to performing only one specific action, accomplishing a given task often requires the use of several machines. The need to ensure that several machines can interact to accomplish a task that none could do individually requires enormous precision and efficiency in timing their activities. Anyone who has seen factory assembly in action will recognize that precise synchronization and mechanical efficiency are not just useful, they are absolutely essential to the functioning of the operation.

In short, machinery creates tremendous time-efficiency, and this time efficiency becomes its own necessity--a necessity that is greatly exaggerated in combat. Because warfare is by its nature a competitive activity, squeezing the maximum efficiency out of your machinery is absolutely vital, which in turn generates even greater pressures for precision and speed. Doing something faster and more accurately than your adversary is invariably an important, and often decisive, advantage. Industrialization introduces machines into the process--which make possible greater precision and speed--and it also introduces the mechanical-industrial approach to time which makes soldiers and officers treat time with greater efficiency and care.

Industrialization changes not only the perception and use of time, it also changes the perception and use of information. Just as industrialization requires greater precision in the management of time, so too does it demand greater precision in the management of information. However, it also demands a far greater *quantity* of information than other economic modes. Information is an "input" into any economic system. Returning to the example of agriculture, the farmer must know about the weather, his crops, his tools, the soil, and a variety of other factors to best be able to determine when and how best to plow, plant, irrigate, harvest, etc. But the amount and the precision of information that agricultural economies require are much lower than industrial economies. For a farmer, it is probably enough to know that April is a "rainier" month than May. As far as exactly when the rain will fall, and how much rain will fall, the farmer has only the crudest idea, and because he can--for the most part--adapt to fit the weather, he does not require greater precision. (Obviously, he would like to know *a priori*, whether there will be a severe drought or extensive flooding, but even in these cases, all the farmer would really like to know is whether his field will be flooded--not how much water will do the inundating). On the other hand, for an engineer or a factory manager, the amount of powder a machine will pour into a bottle must be measured down to the milligram, the number of machines doing the pouring must be known exactly, and their exact rate of production must also be known so that a number of machines can be installed with the exact capabilities required to put the caps on the exact number of bottles being filled with powder by the previous machine. Moreover, this precision in information extends down even to factory workers themselves, who must know how quickly the machines will be producing bottles of powder, how to determine which bottles get which colored caps, how many of each bottle

should be sorted and crated, etc.

The point is that because people in industrial societies must interact constantly with machines, and the machines will not adapt themselves to the fairly loose tolerances of human beings, the humans must adapt themselves to the rigid tolerances of the machines. Because machines cannot think, people must think for them, and because machines can do things with great precision, humans must think with great precision when interacting with machines. It is this need for precise decision-making that creates the demand for large quantities of precise information.

Finally, as the above discussion suggests, industrial economies entail far greater complexity and interaction than is the case in other types of economic systems. Put simply, no other economic system requires as much interaction between different people and machines as does industrialization. Industrial societies require an extensive division of labor and a high degree of specialization among its members, far more so than is the case in any other sort of society. Because this specialization requires people to obtain a vast number of goods and services they do not provide for themselves, life in an industrial society is dramatically more complex than is life in any other sort of society. In particular, life in an industrial society requires all of its members to constantly handle the interactions of various people and machines all doing their jobs and attempting to obtain the goods and services they need. For this reason, it is highly likely that citizens of industrial societies will, on average, be much more accustomed to mediating complex interactions than citizens of unindustrialized societies.<sup>17</sup>

### **The Effects of Underdevelopment on Military Effectiveness**

Having enumerated the various differences between underdeveloped societies and the advanced industrial states, it is possible to infer a number of testable hypotheses regarding how Arab armed forces should be expected to perform to the extent their military effectiveness is shaped by socio-economic status.

#### **Employment of Weapons and other Machinery**

Because underdeveloped societies, almost by definition, have far fewer machines than do advanced societies, and this is especially true of the most sophisticated machinery, their ability to employ machinery and military equipment is likely to prove

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<sup>17</sup> In the past, some scholars have attempted to argue that other common traits of underdeveloped societies were passivity, blind obedience to authority, an unwillingness to act creatively or independently among individuals occupying the lower rungs of a hierarchy, and a constant manipulation of the truth to suit personal interests. These claims, however, are false. First, no scholar has been able to offer a reasonable deductive argument why this should be the case. Second, the empirical evidence overwhelmingly contradicts these claims. From an historical perspective, it is difficult to argue that the dynamic civilizations of the past such as ancient Greece and Rome, China, the Islamic civilization of the Middle Ages, or Renaissance Europe were dominated by these traits. Clearly, before industrialization there was not simply one single "culture" that characterized all of the various civilizations of the world. Indeed, recent efforts to demonstrate that this was the case have ended up concluding the opposite: that these different factors vary immensely from one culture to the next whether developed or undeveloped. The best example of this can be found in Inkeles and Smith's book *Becoming Modern*. Inkeles and Smith begin with the proposition that it is industrialization that instills such traits as independent initiative, improvisation, adherence to the truth, and a capacity for independent action among individuals at the bottom of a hierarchy. However, in their conclusions they argue that, instead, the presence or absence of any of these traits is highly dependent on the cultural antecedents of industrialization, more than on industrialization itself. See in particular, Inkeles and Smith, *Becoming Modern*, Op. Cit., pp. 314-315. Also see David E. Apter, *The Politics of Modernization*, Op. Cit., in which Apter notes dramatic differences in initiative and passivity among various West African tribes.

limited. In particular, it should be the case that Third World personnel are generally incapable of really employing weapons to the full extent of their capabilities. For example, no matter how well a pilot has been trained to fly his jet fighter, if he has had little exposure to machinery he is unlikely to really understand the functioning of the plane, its various capabilities and limitations, and the relationship of the aircraft itself to its avionics and weaponry. It is true that some pilots may have an intuitive understanding of the aircraft and will be able to get maximum performance out of it even without understanding the intricacies of "fly by wire" technology, but such pilots are rare, and so are unlikely to greatly affect the overall military effectiveness of a nation's air force. Consequently, to the extent that Arab military effectiveness is shaped by underdevelopment, *Arab armed forces should suffer from an inability to fully employ the capabilities of their weaponry and a corresponding misuse of machinery.* Moreover, this problem should have a particularly significant impact on those areas of military operations that are most heavily dependent on the functioning of equipment and its operators, including *air-to-air combat, air-to-ground operations, armor operations, and artillery operations.*

### **Absorption of New Equipment**

This same unfamiliarity with machines is likely to manifest itself in the form of unusual *difficulties in fully assimilating new weaponry into the force structure of Arab militaries.* The generally meager exposure to machinery of most members of underdeveloped societies not only means that Third World military personnel will have difficulty taking full advantage of the weaponry they are taught to use, but also that they are likely to have great difficulty reaching even rudimentary proficiency with that same equipment. Consequently, when new weapons or other machines are introduced into a Third World military it should be the case that it takes far longer for their personnel to learn how to use the equipment and integrate it into their operations than is the case for the armed forces of advanced industrial states. Arab armies should fail to employ the full capabilities of the system for years after taking delivery, and may never understand how to use some aspects of a piece of equipment.

### **Maintenance and Repair**

Because members of underdeveloped societies generally have little understanding of machinery, and little exposure to machines, they tend to lack an appreciation of the attention machines require to continue to operate effectively. In some cases, they may be scared of the piece of equipment and therefore will be unwilling to take it apart even to the extent necessary to perform basic maintenance such as cleaning and lubrication. In addition, because most Third World military personnel are unlikely to understand how machines operate, they are unlikely to be able to repair them when they get damaged. Consequently, we should expect to find that *Arab armed forces suffer from severe maintenance problems and very limited repair capabilities resulting in very low operational readiness rates.*

An important sub-prediction of the theory is that, because of the limited numbers of personnel capable of maintaining and repairing military equipment, Third World militaries tend to concentrate their mechanics in higher-level depots. Combat formations then must drag their equipment back to these centrally-located depots for everything from routine maintenance to extensive repairs. We should expect to find the same pattern among Arab militaries, with *front-line units heavily dependent on a small number of centrally-located maintenance and repair depots.*

### **Technical Support to Military Operations**

Industrial or mechanized warfare benefits greatly from, and in some sense *requires,* technical support. By definition, underdeveloped societies are less qualified to provide technical support to their militaries, another factor that should contribute to poor

military effectiveness among Third World armed forces generally, and Arab armed forces in particular. The limited exposure of Third World personnel to machinery, as well as their generally inadequate educations, mean that Third World militaries are willing and able to employ technical solutions to military problems far less frequently than is the case for the armed forces of advanced industrial societies. Research and development is also likely to be underemphasized, inadequate, and unproductive because of the limited numbers of personnel capable of doing it, and because of the tendency of military and political leaders to misunderstand its utility and limitations. Third World arms industries are generally very rudimentary, leaving most Third World militaries heavily dependent on arms imports from industrial nations. Thus, *scientific and technical support to the military is likely to be limited and less productive in the Arab world than in the advanced industrial states.*

### **Combat Engineers**

Combat engineering on the modern battlefield is hopelessly bound up with science and machinery. To be able to build or clear obstacles for mechanized forces, to be able to breach the defenses of enemy forces equipped with industrial weaponry, and to be able to build, move, or demolish the various facilities required to support mechanized military forces requires an intimate understanding of machines, as well as a wide array of specialized machinery to get the job done. Once again, the limited exposure of members of underdeveloped societies to machinery suggests that they likely will have difficulty conceiving and executing the various engineering tasks required for machine-based military forces.

Similarly, engineers require lengthy schooling and a thorough understanding of science. The limited education of most Third World populations frequently limits the number of men qualified to serve as combat engineers, thus in Third World militaries there generally are either a large number of very poor engineers, or a very small number of competent engineers. Thus, *Arab armed forces should suffer from poor support from their combat engineers.* Arab armies should have difficulty crossing water barriers and other terrain obstacles. They should have difficulty breaching well-fortified lines, and building defensive positions of their own. Those fortifications they do build should be unimpressive and poorly maintained.

### **Logistics**

The unfamiliarity of most members of underdeveloped societies with machinery, and their more limited need to deal with complex interactions strongly suggests that underdeveloped states should experience severe problems keeping modern mechanized armies supplied. First, they are less likely to understand the demands of the equipment and so provide inadequately for their needs. Second, to the extent that transport is also motorized/mechanized they may have difficulty understanding how to get supplies to the front-line units resulting in endemic foul-ups. Third, a greater tolerance for imprecision in time may mean that front-line forces do not get the supplies they need when they need them, leading to breakdowns in both vehicles and operations. Finally, logistics for a mechanized military unit is an enormously complex enterprise, requiring the coordination and synchronization of all sorts of different people, machines, and institutions, and it seems reasonable that members of underdeveloped societies will have difficulty managing the interaction needed to keep a vast mechanized force in operation. For all these reasons, *Arab armies should experience constant problems with logistics.*

### **Information Flows**

Less-developed societies treat information differently from developed societies. Specifically, they have much less need for precision and detail than do advanced industrial societies. These same differences are likely to manifest themselves in military organizations. Problems with information management should become especially

pernicious when the military of an underdeveloped state is well-equipped with high-technology weaponry--the warmaking tools of the industrial world. In these cases, the "underdeveloped" military is likely to experience great difficulty because its equipment will demand a higher degree of precision and detail in information than the military personnel will be accustomed to providing. Thus, it should be the case that *Arab armed forces experience problems in combat because information is transmitted imprecisely and without much detail*. At every level, Arab formations should provide inadequate information both to higher and lower echelons regarding their own position, and status and that of the enemy, to be useful for planning, targeting, or provisioning.

An important qualifier to this hypothesis is that the underdevelopment theory does not predict deliberate obfuscation, but innocent vagueness. The theory does not predict that Arab personnel will deliberately attempt to mislead their superiors or subordinates by providing inadequate and imprecise information. Instead, it predicts that Arab personnel will provide inadequate and imprecise information only because it will never occur to them to provide more detailed and more precise information.

### **Planning**

Because underdeveloped societies have difficulty handling information and complexity to the same extent as industrial societies, *Arab militaries should rely on simple courses of action, and should fare poorly when attempting to execute complicated plans*. Intricate military operations involving large mechanized forces are enormously complex undertakings. Simply drawing up the plans for such operations requires tremendous amounts of precise information and an easy ability to conceive of complex situations in the abstract. The underdevelopment theory states that these are qualities of which Arab militaries should be in short supply. Consequently, the theory would predict that Arab militaries should generally avoid such complicated planning, and should do a poor job when they do attempt it. Moreover, turning complex plans into actual military operations also requires enormous amounts of very detailed data and an ability to handle complex interactions between large numbers of men, machines, and abstract entities (such as "brigades" and "quartermaster corps"). Therefore, Arab armies should also have great difficulty taking complex battle plans and turning them into successful military operations. In short, the theory predicts that Arab militaries should prefer simple plans that can be executed with a minimum of intellectual effort and should experience crippling problems as their operations get more complex.

### **Intelligence Collection and Analysis**

Soldiers and officers from underdeveloped societies are likely to place a lower emphasis on the importance of information in making war. This is entirely the result of their limited exposure to machinery and thus their likely inability to recognize the amount and precision of information required for industrial warfare. For example, it is not enough to know that the enemy's artillery is on the other side of the river--if you want to use counterbattery fire to suppress or destroy the enemy's artillery you need fairly precise coordinates so that your own artillery fire lands in the right place. Likewise, it is not enough to simply have advanced interdiction aircraft, you need to find proper targets for the aircraft, determine exactly the best route to the target, likely enemy air defenses, exactly what type of munitions to employ to destroy the target, etc. All of these things require information, and relatively specific information at that--information that personnel unfamiliar with how machines operate and what they require to operate properly are not likely to recognize as being crucial to the proper employment of the aircraft. Consequently, to the extent Arab militaries suffer from underdevelopment, we should expect to find that their *intelligence gathering and analysis is inadequate in terms of the quantity and precision of the information produced*.

One caveat that should be borne in mind regarding intelligence operations and underdevelopment is that these predictions focus primarily on tactical, or battlefield

intelligence. The theory makes no predictions regarding strategic intelligence, such as that pertaining to the enemy's overall disposition of forces, broader objectives, and general capabilities. There is no particular reason why the armed forces of underdeveloped nations should not value such information and diligently attempt to obtain it. Instead, the theory predicts only that at a very "micro" level, personnel from underdeveloped societies will be unaware of the types and amount of information required by mechanized military forces to perform their tasks at optimal levels.

### **Combined Arms Operations**

As its name implies, combined arms operations is the integration of the various capabilities of modern, mechanized armed forces into cohesive units. It is because of their coordination that combined arms units bring to bear strengths and capabilities greater than the sum of their parts. Thus effective combined arms operations hinges on the management of complex interactions. Different personnel trained to perform different missions must be integrated with one another and with machines designed to perform different functions. The complexity of this problem is enormous, and even the militaries of many advanced industrial societies have tremendous difficulties making this coordination work.<sup>18</sup> This being the case, it is only to be expected that Third World militaries, comprised of men unaccustomed to dealing with the kind of complexity and synchronization common to industrial societies, would have serious problems in effectively integrating their various elements into cohesive, combined arms teams. Thus, *Arab armies should have considerable difficulty implementing effective combined arms operations.*

### **Operational Tempo**

Lacking the emphasis on speed and precision in the management of time found in industrial societies, the militaries of Third World states generally operate at a much slower pace than do the armed forces of the industrial nations. Third World military personnel seem to prefer a slower pace of operations and routinely have difficulty adjusting to a faster pace. While some Third World nations are capable of very rapid operations for brief periods of time, they almost inevitably are unwilling and/or unable to sustain this pace for protracted lengths of time. Thus *Arab armed forces should operate at a relatively slow pace and have difficulty competing with an adversary that can operate at a much quicker pace of operations.* However, it is important to remember that this difficulty is only likely to surface when Arab states fight industrial societies: Arab states fighting one another, or fighting other underdeveloped nations are likely to be facing opponents that also move at a slower pace, and therefore, the pace of operations should not be a problem for any of the participants.

### **Training**

Widespread illiteracy and the largely rudimentary education of the populations of underdeveloped countries are likely to contribute to problems with training and military education. A high illiteracy rate usually limits the ability of the populace to learn military skills, and therefore limits their utility as soldiers. Likewise, the absence of a technical education also hinders a person's ability to learn how to operate machinery and weaponry. Consequently, *Arab armies should have difficulty training their troops in military operations.*

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<sup>18</sup> For a good overview of the varying abilities of different industrial societies to perform combined arms operations effectively, see Jonathan House, *Toward Combined Arms Warfare*, (Fort Leavenworth, KS: CGSC, 1984). Also see the various essays in Allan Millet and Williamson Murray eds., *Military Effectiveness*, 3 Vols., (Boston: Allen and Unwin, 1988).

### **Additional Predictions of the Theory**

As was the case for the three other theories I examined, in the case of underdevelopment as well, it is worth stepping back from the micro-level predictions regarding specific patterns of military effectiveness to consider larger issues. The theory that underdevelopment hinders Arab military effectiveness makes several broader predictions. First, since according to this theory, military effectiveness is the product of socio-economic development, Arab states at the same level of development should have the same military effectiveness, while Arab states at higher levels of development should demonstrate greater military competence than those at lower levels of development. By the same token, non-Arab states should demonstrate the same level and patterns of military effectiveness as Arab states of roughly the same level of socio-economic development. The armed forces of Arab states should perform better in combat than the armed forces of non-Arab states at lower levels of development and vice versa.

Second, changes in socio-economic status should also be reflected in military prowess. Arab states that demonstrate significant socio-economic growth over the course of the postwar period should demonstrate a corresponding increase in military effectiveness, while the military competence of Arab states that stagnate or decline should show similar patterns in battle. In the event that two Arab states started out in 1945 at essentially the same level of socio-economic development but one state developed faster than the other, then both states should have the same level of military effectiveness at the start of the postwar era but the faster-developing state should end with a greater degree of military competence than the slower-developing state. By contrast, if two states, one Arab and one non-Arab, were to develop at a similar pace over the course of time, then their military effectiveness should also run parallel courses and should be identical both at the start of the time period and at the end.

Third, military effectiveness should parallel the specific socio-economic background of the men who comprise a military force. After all it is not always the case that the socio-economic background of the armed forces exactly mirrors that of the larger society. Consequently, services, units, or specific sub-elements of Arab armed forces drawn from better off ethnic groups or classes should perform better than those comprised of personnel from less well off ethnic groups and classes. Military forces drawn from more affluent, better educated, healthier, and more technically-skilled groups should perform better than units recruited from poorer, less well educated, sicklier, and less technically-skilled groups. Similarly, Arab forces drawn from better off groups should demonstrate greater military effectiveness than non-Arab forces drawn from worse off groups, and vice versa.

Finally, the theory predicts that Arab militaries should handle simpler equipment better than more sophisticated equipment. A principal element of the underdevelopment theory is the lack of familiarity of personnel from pre-industrial societies with machinery and electronics. Consequently, the more technologically advanced a weapon is, the more difficult it should be for the Arabs to employ properly. Likewise, Arab militaries should handle sophisticated weaponry better than the militaries of non-Arab states that are lower on the socio-economic scale than the Arab states, but should do worse than the militaries of non-Arab states that are higher on the scale of development. Of course, the case of "smart" weapons is an important qualifier to this prediction. In those instances where increasing technological sophistication has actually made weapons systems easier to use, all of these predictions go out the window because the predicted correlation between a military's ability to use advanced weaponry and its level of socio-economic development will have been shattered.





## Part II

### Case Studies of Arab Military Effectiveness, 1945-1991

Having laid out the four alternative explanations for Arab military performance in Part I, the next step is to examine the relevant military history of the Arab world since 1945. Returning to the analogy of the sick man I developed in the introduction to Part I, we must go back to the patient and make a more comprehensive examination of his condition to establish which of the symptoms of the various ailments he actually manifests. In other words, we must examine the actual history of Arab armies and air forces in combat since 1945 to establish exactly how they performed. We then must compare this actual performance to the various predictions of the four competing theories. To the extent that Arab military effectiveness is the result of any of these alternative explanations, actual Arab performances in combat should conform to the predictions of the theory. The greater the extent to which Arab armies and air forces perform in the manner suggested by one of the theories, the greater the confidence we can have in ascribing the phenomenon to that source. Conversely, if Arab armies do not act in the manner predicted by a particular theory, we can have confidence that this theory does not offer a valid explanation of Arab military effectiveness since 1945.

#### Which Cases?

In this part of my study I delve deep into the military history of the Arabs since 1945. I examine the military performance of five different Arab states: Egypt, Iraq, Jordan, Saudi Arabia, and Syria. While many other Arab states have found themselves at war since 1945, these five states encompass the lion's share of the Arab experience in combat during the postwar era. Overall, Arab armies and air forces have gone to war approximately forty-five times since the Second World War. The five Arab states I look at account for twenty-seven times of these engagements. (See table IIa. below for a list of all of these engagements).<sup>1</sup> Therefore, we can have considerable confidence that the

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<sup>1</sup> For purposes of this study, I consider an "engagement" to be any instance when the army and/or air force of an Arab state engage in combat operations against an organized military opponent. Counter-insurgency operations by an Arab military are considered engagements. However, insurgency operations themselves are not. Counter-insurgency (COIN) operations are conducted by organized militaries, and while subtly different from conventional military operations, armies performing COIN operations still should be expected to manifest the same kinds of behavioral patterns as in conventional military operations. For example, if an army suffers from overcentralization, then this problem ought to be apparent in both conventional and counter-insurgency operations. By contrast, insurgencies themselves are not conducted by conventional militaries. For the most part, they are waged by highly disorganized groups with little or no military training whatsoever. Consequently, the nature of insurgencies likely produces enormous behavioral disfunctions that would confuse the issue.

Please note that wars that include the participation of more than one Arab military are considered to be as many engagements as there are Arab armies participating. Thus, the 1948 War of Israeli Independence counts as four engagements because Syria, Jordan, Egypt, and Iraq all participated. This was necessary to allow me to focus on the Arab militaries by country, rather than by war. Traditionally, authors on the Middle East have examined Arab military performance in a particular war. This approach has three problems. First, it tends to group the Arab armies together as indistinguishable lumps. Second, it selects out the influence of societal factors because it concentrates on the performance of Arab armies for very

twenty-seven engagements examined in this study will give a very accurate portrait of Arab military effectiveness during this period more generally. Moreover, when most commentators have sought to understand Arab military effectiveness they focused mostly on the Arab-Israeli wars and the Persian Gulf War, all of which are included in my sample. Thus the theories developed by other observers should be strongest in explaining the specific engagements I examined. Consequently, if the predictions of these theories are not borne out by the history of these wars, we can be even more confident that the theories are not adequate explanations of Arab military effectiveness.

Tracing the military histories of these five states also allows me to examine the performance of Arab armies and air forces against a wide range of opponents covering the geographic, socio-economic, and cultural spectrums. Egypt, Syria, Jordan, and Iraq have all fought Israel on numerous occasions. Egypt also has fought the British and French and it has fought the Yemeni royalists. In addition to Israel, Iraq has also fought the Kurds; it has fought Iran; and it has fought a multinational coalition led by the United States, and including forces from Britain, France, Egypt and Saudi Arabia. Beyond the Israelis, Syria has also fought Jordan, the PLO, and any number of Lebanese militias. This range of experiences will help to ensure that the various patterns of behavior manifested by the Arab armies are not a product of fighting one particular opponent, or kind of opponent (i.e., rich, poor, Western, Arab, insurgency, conventional military, etc.).

### **Organization and Goals of the Chapters**

I examine the military histories of these five Arab states with an eye toward the various predictions of the four competing explanations described in Part I. (See table IIb. below for a summary of these predictions). Each chapter contains a brief outline of the course of each of the wars waged by these countries. These accounts are not complete military histories of the Arab military in question, but focused summaries of those aspects of their experience that are relevant to assessing their military effectiveness. Consequently, I have glanced over or left out altogether some battles or operations because they shed little light on the question of military effectiveness. In addition, each chapter also addresses changes in the influence of the various factors identified by the four theories as contributing to Arab military ineffectiveness: increases and decreases in politicization, adoption or abandonment of a Soviet model of operations, etc. Thus each chapter provides a description both of the actual military effectiveness of each of the five Arab states over time, as well as the degree to which the proposed causal factors were actually present during the same period.

One independent variable I do not track in these historical studies is Arab culture itself. Although I recognize that Arab culture did change during the 46 years from 1945 to 1991, I do not believe this can be measured precisely enough to be useful. Ultimately, culture is a nebulous variable that resists precise measurement. While it is often possible to observe changes in culture occurring over long periods of time, centuries or millennia, it is far more difficult to chart shifts decade by decade, or year by year. Consequently, for purposes of this study I treat culture, in effect, as a constant: it has the same value at the beginning of the period as at the end.

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discrete periods of time, missing the long periods between wars when societal factors have their impact. Third, it fails to capture much of the learning and development by the different Arab armed forces from one war to the next. Between 1945 and 1991 all of the Arab armed forces underwent very considerable changes: they changed military doctrines, they became more or less politicized, they encountered problems and tried to solve them. This development is crucial to understanding Arab military effectiveness during this period and can only be properly addressed by tracing the history of each Arab military as a separate entity. Consequently, it was necessary to treat each Arab military's participation in combat as a separate "event."

As Clausewitz admonished over 150 years ago, war is a political action, fought within a political context. It is impossible to judge the competence of an army or a general if you don't know what they are trying to accomplish. Therefore, for each war in which an Arab army participated, I outline the strategy and goals of the Arab military as well as those of its adversary to provide the political yardstick against which the military performance can be judged. This is particularly important when attempting to assess generalship because the crucial measure of a strategic plan is its ability to translate the political objectives into military operations. It is less important for tactical considerations because a battalion can fight just as well trying to secure a meaningless objective as it can trying to secure a vital hill.

Another important issue I address in each chapter is why the Arab militaries won or lost each engagement in which they participated. It is crucial to know not only the patterns of military performance evinced by Arab militaries but also the importance of each pattern. Ultimately, I am attempting to explain why it is that the Arab states have fared so poorly at war since 1945. The patterns themselves are only important in so far as they have proven critical in victory or defeat. If a particular pattern of military performance has little affect on the course of a war, then it is of little importance. For example, it may be that most or all of the Arab armies have experienced poor morale in most or all of the wars they have fought. This would suggest that politicization of one form or another is present. However, it may also be the case that poor morale really wasn't an important problem for the Arab militaries in any of their wars. It may turn out that another pattern of behavior had a much more profound impact on Arab fortunes--such as poor generalship--than did poor morale. In this situation, we would have to conclude that the evidence supports the notion that the sources of military ineffectiveness associated with poor morale did have *some* influence on Arab armed forces, but that this influence was less than the influence of the theories that explained poor generalship, which was observed to have been the more important factor in their defeats.

Therefore, it is crucial to establish not just the patterns of Arab military effectiveness themselves but the reasons why each Arab military lost (or won just barely) each engagement in which it participated. For this reason, each chapter not only presents the history of each engagement but, where necessary, also includes an assessment of the various factors that resulted in victory or defeat. In particular, for each engagement I provide an assessment of the quantitative balance as well as the qualitative balance of equipment on each side. Simply outnumbering an opponent can be a tremendous advantage in combat, as can possessing significantly more capable weaponry. I address the issue of terrain because in some engagements the terrain gave an advantage to one side or another. Surprise, both tactical and strategic can also be a major factor in victory and defeat.<sup>2</sup> In addition, I consider which side was the defender and which the attacker in each engagement. In the modern era, there is an inherent advantage to the defense and therefore an attacker must have some kind of an advantage--quantitative or qualitative--that will allow him to prevail over the defender. In Clausewitz's words: "The defensive form of warfare is intrinsically stronger than the offensive."<sup>3</sup> Finally, in many cases I address the capability of the opponent. Warfare is a competitive activity and one side's skill can only be judged relative to that of its opponent. Consequently, I also note differences in the skill level of an Arab military's opponent where appropriate. All of these factors must be taken into consideration when attempting to determine who won or lost a war and why, and how well each of the participating armies fought.

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<sup>2</sup> Tactical surprise is essentially when the adversary knows that an attack is coming, but cannot anticipate the time or the place. Strategic surprise, on the other hand is essentially when surprise is so complete that the adversary does not even know the attack is coming and so is completely unprepared for it.

<sup>3</sup> Carl von Clausewitz, *On War*, Edited and Translated by Michael Howard and Peter Paret, (Princeton, NJ: Princeton University Press, 1976), p. 358. (Emphasis omitted) Also see the rest of the section entitled "The Advantages of Defense," pp. 357-359.

### **Strategic Versus Tactical Performance**

In the four previous chapters I made frequent reference to the strategic and tactical levels of warfare.<sup>4</sup> These are important concepts for my study and therefore I have tried to carefully draw this same distinction throughout my treatment of Arab military history. Unfortunately, there is neither a generally accepted dividing line between the strategic and tactical realms, nor is it possible to arbitrarily assign one for purposes of this study. Distinctions between the strategic and the tactical levels are both fixed and variable. The fixity is contributed by the fact that there are different dynamics to moving smaller bodies of troops over smaller areas than there are to moving larger bodies of troops over larger areas. Because of these innate differences, a platoon or a company is always a tactical formation and an army group or an army is always a strategic formation. However, particularly because my study concentrates on somewhat nebulous behavioral patterns that focus on the differences between larger and smaller groups as well as the tops and bottoms of hierarchies, the strategic and tactical levels can vary based on the size of the military in question. In a small military of only 25,000 men, command of a brigade is a strategic position because there are so few brigade commanders and because this position is likely to be close to the top of the military hierarchy. By contrast, in a large military of 1,000,000 men, command of a brigade is a tactical position because there will be so many brigade commanders and they are likely to be closer to the bottom of the military hierarchy.

I have not come up with a hard and fast rule that defines tactical versus strategic levels but have allowed these categories to fluctuate to conform to the particulars of each situation. For much of the postwar period, the Egyptian, Syrian and Iraqi militaries consisted of several hundred thousand men comprising roughly six to twelve divisions and one or two dozen air force squadrons. These armies have served as a baseline, and in their cases I have generally considered a brigade/squadron to be a tactical command and a division/wing/airbase to be a strategic command. Beyond these cases, I have altered my definitions of strategic versus tactical as the circumstances dictated. For the most part, the smaller the army, the lower in the hierarchy I placed the strategic/tactical divide, and the larger the army the higher in the chain of command I placed it.

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<sup>4</sup> For the sake of simplicity I have not employed the operational level as a further distinction. While I think that in many ways, including the operational level as a third category is extremely important when treating military topics, it is unnecessary for my purposes. Because of the nebulous quality of my various independent variables it is extremely difficult to parse my data more finely than the gross distinctions between strategic and tactical levels. To throw in the operational level as well would introduce a degree of precision that I believe would be difficult to justify.

**Table IIa. Participation of Arab Militaries in Combat Since 1945**

<b>Country</b>	<b>Opponent</b>	<b>Date</b>	<b>Covered in this study?</b>
Algeria	Morocco	1962-1963	
Algeria	Algerian Islamists	1992-Present	
Egypt	Israel	1948	√
Egypt	Israel/Britain/France	1956	√
Egypt	Yemeni Royalists	1962-1967	√
Egypt	Israel	1967	√
Egypt	Israel	1967-1970	√
Egypt	Israel	1973	√
Egypt	Libya	1978	
Egypt	Iraq	1991	√
Iraq	Israel	1948	√
Iraq	Kurds	1962-1970	√
Iraq	Israel	1973	√
Iraq	Kurds	1974-1975	√
Iraq	Iran	1980-1988	√
Iraq	Kuwait	1990	√
Iraq	Multinational Coalition	1991	√
Jordan	Israel	1948	√
Jordan	Israel	1951-1967	√
Jordan	Israel	1967	√
Jordan	Israel	1968	√
Jordan	PLO/Syria	1970-1971	√
Jordan	Israel	1973	√
Kuwait	Iraq	1990	
Libya	Egypt	1978	
Libya	Chad	1984-1987	(√)
Morocco	Algeria	1962	
Morocco	Polisario		
Oman	Green Mountain rebellion	1958	
Oman	Dhofaris	1971-1975	
Oman	Yemen (Aden)	1971-1975	
Saudi Arabia	Iraq	1991	√
Syria	Israel	1948	√
Syria	Israel	1967	√
Syria	Jordan	1970	√
Syria	Israel	1973	√
Syria	PLO/Lebanese Muslims	1976-1978	√
Syria	Israel	1982	√
Syria	Lebanese Christians	1982-1990	
Yemen (Republicans)	Yemen (Royalists)	1962-1967	
Yemen (Sanaa)	Yemen (Aden)	1977-1979	
Yemen (Aden)	Yemen (Sanaa)	1977-1979	
Yemen (Aden)	Oman	1971-1975	
Yemen (Sanaa)	Yemen (Aden)	1994	
Yemen (Aden)	Yemen (Sanaa)	1994	

**Table IIb. Summary of Predictions of Various Theories Purporting to Explain Patterns of Arab Military Effectiveness since 1945.**

Prediction	Arab Culture	Politicization of the Military			Soviet System	SED Level
		Commis sarism	Praetor ianism	Palace Guardism		
Tactical creativity	Poor				Poor	
Strategic creativity		Poor				
Information flows	Poor	Poor	Poor			
Tactical initiative	Poor				Poor	
Strategic initiative		Poor				
Centralization/Delegation	Poor	Poor			Poor	
Simplicity of Chain of Command		Poor				
Tactical use of maneuver	Poor			Poor	Good	
Strategic use of maneuver		Poor		Poor	Good	
Employment of armor	Poor			Poor	Poor	Poor
Employment of artillery	Poor			Poor	Uneven	Poor
Air-to-air combat skills	Poor	Poor		Poor	Poor	Poor
Air-to-ground operations	Poor	Poor		Poor	Poor	Poor
Ad hoc operations	Poor	Poor		Poor	Good	
Set-piece operations	Adequate	Poor		Poor	Good	
Combined arms	Poor	Poor	Poor	Poor	Good	Poor
Unit cohesion	Uneven	Poor	Poor			
Personal Bravery	Good	Poor				
Maintenance and repair	Poor				Good	Poor
Assimilation of equipment	Poor					Poor
Logistics	Poor				Good	Poor
Combat engineers	Poor				Good	Poor
Technical support	Poor				Good	Poor
Tactical intelligence	Poor				Uneven	Inadequate
Strategic intelligence		Poor			Good	
Operational Security	Good				Good	
Tactical leadership	Poor			Uneven	Poor	
Strategic leadership		Poor		Uneven		
Ability to Plan and Execute Complex Operations		Poor			Good	Poor
Officer rotations		Excessive				
Morale (at start of the war)		Poor	Poor	Poor		
Attention to training			Poor			
Emphasis of training				Misguided		
Ability of soldiers to benefit from military training						Poor
Preferred operational tempo	Slow				Fast	Slow
Attention to offensive operations					Excessive	
Attention to defensive operations					Poor	
Attention to air superiority					Good	
Unit and service coordination	Poor	Poor	Poor			
Willingness to take casualties					High	

A blank square indicates the theory does not necessarily make any prediction in this category.

## Chapter 6

### Egyptian Military Effectiveness, 1947-1991

The modern Egyptian military was founded by Muhammad Ali, who ruled Egypt from 1805 to 1848. Muhammad Ali sought to carve an independent realm out of the Ottoman empire and for this purpose he bought European weaponry and expertise and created an army which he used to defeat the Sultan's forces and establish sway over Egypt, Syria, and parts of Arabia. European intervention on behalf of the Sultan brought Muhammad Ali's dreams of an independent Kingdom to an end, and sharply curbed the size and independence of the Egyptian military. The modern armed force he had built then languished until Britain took control of Egypt in 1882.<sup>1</sup>

The defense of Egypt, and especially the Suez canal, was considered a vital national interest both in London and Simla, the seat of British colonial government in India. Consequently, there were always significant numbers of British regulars posted to Egypt, which made the development of indigenous Egyptian military forces far less important to Britain than in its other Middle Eastern territories such as Transjordan and Iraq. The British started their rule over Egypt by crushing the indigenous Egyptian officer corps.<sup>2</sup> They ousted most of the Turks who had previously dominated Egypt's officer ranks. Although commissions were given to Egyptians from the entire range of society, the very poorest *fellahin* (peasants) were excluded from officer billets. Nevertheless, the lowest classes of the *fellahin* comprised the vast majority of the Egyptian enlisted ranks, while the largest percentage of Egyptian officers came from the (slightly) better off peasantry, creating severe social splits between the officers and their troops.<sup>3</sup> While the British provided the Egyptians with new military equipment and revamped Egypt's military doctrine along British lines, the presence of British regulars made improving the Egyptian military a low priority, and throughout the period of British rule, the Egyptian army was largely relegated to internal security duties. Indeed, even during the most anxious moments of the German threat to Egypt during the Second World War, London drew very little on Egyptian units to defend North Africa.<sup>4</sup>

#### The War of Israeli Independence, 1947-1948

Egyptian performance against Israel in 1948 was very poor. The Egyptian military suffered from several decades of employment purely as an internal security force. This palace-guardism had left the Egyptian armed forces ill-equipped to handle conventional

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<sup>1</sup> On Muhammad Ali's reign, see P. J. Vatikiotis, *The History of Modern Egypt*, Fourth Edition, (Baltimore, MD: Johns Hopkins University Press, 1991), pp. 49-69.

<sup>2</sup> G.P. Armstrong, "Egypt," in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, CT: Greenwood Press, 1983), p. 147.

<sup>3</sup> Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970), pp. 300-322.

<sup>4</sup> Edgar O'Ballance, *The Arab-Israeli War, 1948*, (London: Faber and Faber Ltd., 1956), p. 77; Nadav Safran, *From War to War*, (NY: Pegasus, 1969), pp. 206-207; Vatikiotis, pp. 169-374.

military operations against even a fledgling military force such as the Israeli *Haganah*. Praetorianism was not a problem because the military remained firmly under King Farouk's sway, while commissarism was only a minor issue because most of the officers had risen through the ranks during the period of British occupation when there was no threat of a military coup. The Egyptians relied entirely on British military practices thus there was no Soviet influence on their performance. Finally, while the Egyptians had one of the highest levels of socio-economic development in the Arab world in 1948, by European standards it was vastly underdeveloped.

### **The Egyptian Invasion**

The first shots Egyptian troops fired in anger since the conquest of the Sudan in 1899 were fired at Israel in April 1948. Egypt joined with its Arab brothers in opposing the creation of the state of Israel, and sent a large expeditionary force to destroy the Jewish state before it could establish itself. Egypt threw its entire military into this effort. However, because 80 percent of Egypt's male population between 15 and 50 years of age were mentally or physically unfit for military service, and because Egypt's nascent logistics system was extremely limited in its ability to support ground forces beyond Egypt's borders, Cairo never succeeded in putting more than 40,000 men into the field.<sup>5</sup>

Expecting a quick victory over the poorly armed and organized (and highly disdained) Jews, Egypt initially dispatched about 10,000 men to Palestine. The force was commanded by Major General Ahmed Ali al-Mwawi and consisted of five infantry battalions, an armored battalion with British Mark VI and Matilda tanks, a battalion of sixteen 25-pounder guns, a battery of eight 6-pounder guns, a medium machine gun battalion, and supporting troops. In addition, the Egyptians deployed 15 fighters and 5 bomber/transporters to Sinai to support the invasion force.<sup>6</sup> Opposing them, the Haganah could field 50,000 highly motivated but woefully under-armed and trained troops. About 6,000 of the Israeli soldiers made up the three elite *Palmach* brigades, while another 20,000 comprised the six Haganah field brigades. The other troops were mostly regional forces that could be called on to defend their locale, but little more. At the start of the war, the Haganah had only 33,000 rifles and submachine guns, a bit more than 1,500 machine guns, less than 900 light mortars, 85 anti-tank weapons, 2 ancient artillery pieces, 4 tanks, and 4-500 home-made armored cars. Moreover, the Haganah not only had the Egyptians to deal with, but also had to fight invading armies from Lebanon, Syria, Iraq, and Jordan, as well as indigenous Palestinian forces.<sup>7</sup>

The Egyptian offensive began on 14 May 1948, the day Israel declared its independence. The Egyptian force was divided into two columns. The stronger force was to drive up the coast to capture Tel Aviv, while a smaller force mostly of Egyptian irregulars pushed through the central Negev to Jerusalem to stake Cairo's claim to the Holy City and prevent Transjordan's King Abdullah from seizing it all.<sup>8</sup>

The eastern column, under Lt. Colonel 'Abd al-Aziz, advanced fairly quickly because it met little Israeli resistance until it reached the settlement of Ramat Rachel south of Jerusalem. There the Egyptians linked up with elements of Transjordan's Arab Legion. On 21 May, the two forces launched a combined assault against the small Israeli force defending the village, driving them out largely by sheer weight of numbers. However, later that day, a company of the Haganah's Etzioni brigade reinforced the Israelis, who then counterattacked and retook the village. The Egyptians and Jordanians launched repeated attacks for the next four days but were unable to retake Ramat Rachel. The Egyptians dug-

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<sup>5</sup> O'Ballance, *The Arab-Israeli War*, pp. 70-77.

<sup>6</sup> Col. Trevor N. Dupuy, *Elusive Victory*, Third Edition--Paperback Edition, (Dubuque, IA: Kendall Hunt, 1992), p. 55; O'Ballance, *The Arab-Israeli War*, p. 77.

<sup>7</sup> Dupuy, pp. 43-44; O'Ballance, *The Arab-Israeli War*, pp. 70-74.

<sup>8</sup> O'Ballance, *The Arab-Israeli War*, pp. 89-91.



in south of the town and never moved farther north.<sup>9</sup>

The route of the western column advancing along the coast was far more eventful. A series of Israeli settlements dotted the Gaza area on the coastal route to Tel Aviv. The first two Israeli settlements, Nirim and Kfar Darom were so tiny that Mwawi left reinforced companies to deal with them while the main force moved on. In both cases, despite overwhelming numerical superiority (there were 40 Israeli defenders at Nirim and 30 at Kfar Darom) plus armor, artillery, and even some air support, the Egyptian units were unable to take either settlement in numerous attacks. In every case, the Egyptians conducted frontal assaults against the main Israeli defenses, their artillery fire and airstrikes were wildly inaccurate, and the infantry turned and ran as soon as it became clear that their firepower had not destroyed or cowed the defenders. In addition, in each attack, the Egyptian armor failed to support the infantry, turning back the moment it encountered any resistance and leaving the infantry to carry on alone. As a result, Mwawi decided to invest both settlements to prevent the Israelis from interfering with the communications lines of the main Egyptian column.<sup>10</sup>

On 16 May, the main Egyptian force reached the Israeli settlement of Yad Mordechai which was bigger and better defended than the other two and Mwawi felt he could not bypass it. The Egyptians took two full days to prepare an assault on the settlement and then on 19 May threw two battalions of infantry and a battalion of armor supported by an artillery battalion against the Israeli infantry company defending the settlement, but the Israelis beat them back after three hours of heavy fighting. The next day, the Egyptians launched four more attacks, all of which were repulsed. In this battle too, the Egyptians were hampered by the inaccuracy of their artillery and air support and by difficulties in coordinating the operations of their armor and infantry. The Egyptians regrouped for several days and Mwawi apparently used this time to work out better coordination between his armor and infantry; when they attacked again on 23 May the armor did a much better job supporting the infantry and the assault succeeded in taking part of the settlement. That night, the Israeli defenders, who were exhausted and low on ammunition decided to withdraw, leaving Yad Mordechai in Egyptian hands.<sup>11</sup> The Egyptians took 300 casualties in the fighting.<sup>12</sup>

With Yad Mordechai taken, Mwawi pressed on up the coast, masking and bypassing the well-fortified Israeli settlement of Nitzanin. He was reinforced by sea at Ashqelon (then simply a small Arab town called al-Majdal), at which point he detached part of his force and sent it eastward along the Ashqelon-Hebron road to contact Aziz's force south of Jerusalem. Mwawi once again resumed the march with the rest of his column, about 2,500 men, but was stopped at the Ashdod bridge 3 kilometers north of the town of Ashdod on 29 May. Here, only about 30 kms from Tel Aviv, the Israelis planned to make their stand. The Israelis had destroyed the bridge, brought in several battalions from the Givati brigade to man the river line, deployed another force at Kfar Warburg southeast of Ashdod to menace the right flank of the Egyptian advance, and had even committed their only two 65mm artillery pieces. When the Egyptians approached, the Israelis fired back with all they had. In addition, four Messerschmitt ME-109 fighters the Israelis had just acquired from Czechoslovakia attacked the Egyptian column as it approached the river. Although the Israeli pilots' attacks were not terribly accurate, their mere appearance, coupled with the sudden introduction of Israeli artillery (paltry though it was), the strong Israeli positions, and the threat to his flank, all appear to have convinced Mwawi to halt.<sup>13</sup>

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<sup>9</sup> Dupuy, pp. 56, 58, 63; O'Ballance, *The Arab-Israeli War*, pp. 93-94.

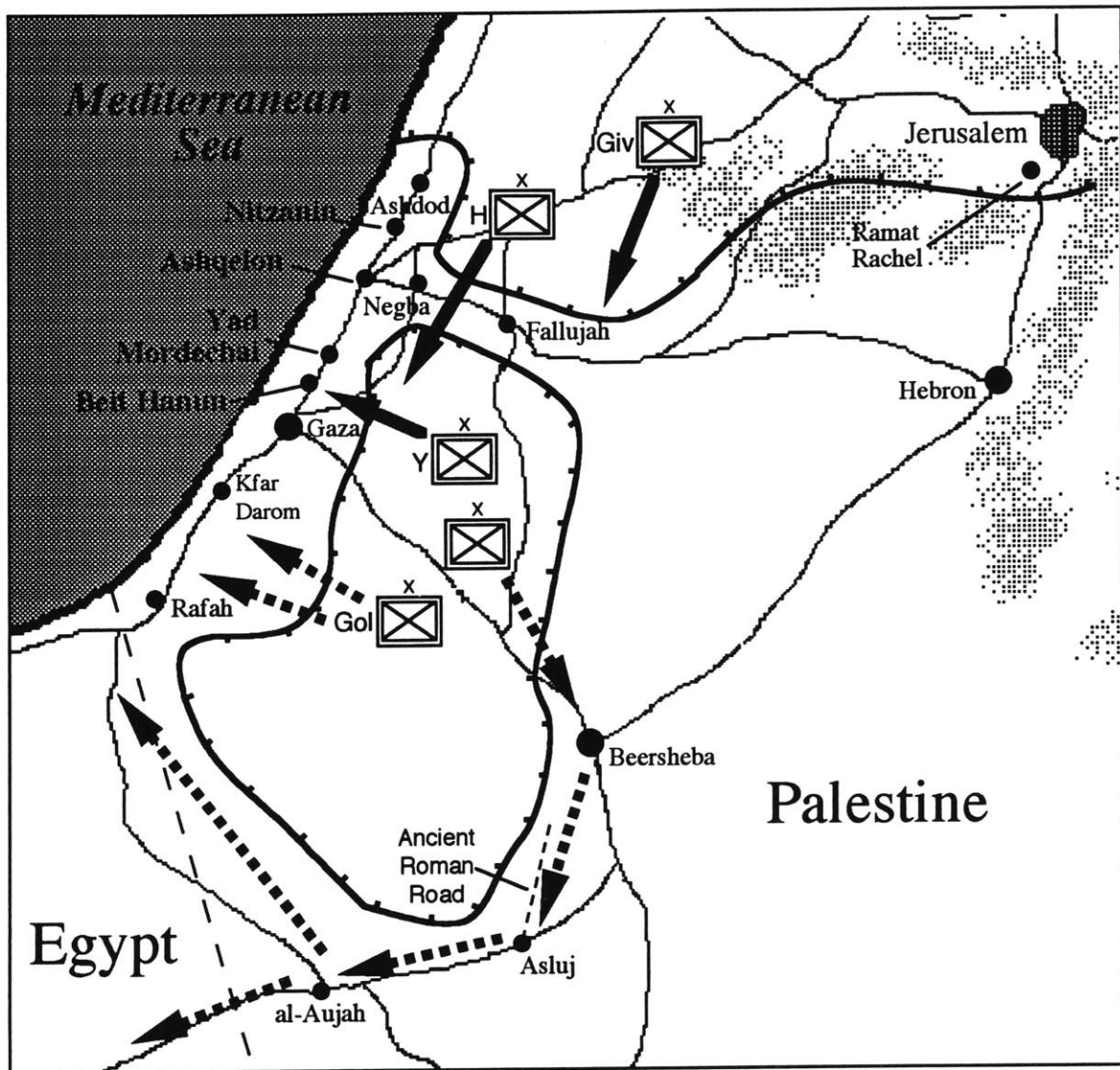
<sup>10</sup> Dupuy, pp. 56-57; Lt. Colonel Natanel Lorch, *The Edge of the Sword: Israel's War of Independence, 1947-1949*, (NY: Putnam and Co., 1961), pp. 204-208; O'Ballance, *The Arab-Israeli War*, pp. 90-93.





<sup>11</sup> Dupuy, p. 57; Lorch, p. 209; O'Ballance, *The Arab-Israeli War*, pp. 91-92.

<sup>12</sup> Lorch, p. 209.

<sup>13</sup> Dupuy, p. 57; Lorch, p. 209; O'Ballance, *The Arab-Israeli War*, pp. 91-92.

## Israel's Conquest of the Negev from Egyptian Forces, October 1948-January 1949



-  - Israeli attacks, 15-22 October
-  - Israeli attacks, 22 December 1948 - 8 January 1949
-  - Egyptian frontlines, October 1948
-  - Israeli Brigades

Mwawi apparently concluded that his forces were overstretched and he needed to consolidate and improve his positions. He left Brigadier General Naguib in command of the forces at Ashdod and ordered them to dig-in. On the night of 2/3 June the Israelis tried to outflank the Egyptian positions at Ashdod and cut their line of communications along the coast. However, the Israeli attack was confused and poorly coordinated and ran into the entrenched Egyptians who broke up the assault fairly easily. Simultaneously, Mwawi had dispatched another force to attack the Israeli settlement of Negba, which threatened his line of communications east to Hebron. In this operation the Egyptians used almost a full battalion of armor supported by infantry, however, the infantry lagged far behind and the tanks and armored cars surged ahead and attacked anyway. Without infantry support, and with only very inaccurate artillery fire, the Egyptian attack was stopped by Israeli infantry with Molotov cocktails. The Egyptians were beaten back after losing 4 tanks, 2 armored cars and over 100 casualties. Meanwhile, Mwawi himself turned his attention to the bypassed settlement of Nitzanin. The Israeli settlement was defended by a company and Mwawi hit it with an infantry battalion, a platoon of tanks, a company of armored cars and his entire battalion of 25-pounders. In addition, he brought in a squadron of fighters to provide air support. He took several days to carefully work out the combined arms preparations and began the attack in the early hours of 7 June with a six-hour artillery bombardment. Despite this, the Israelis beat back the initial attack, prompting Mwawi to call in air support. Under constant airstrikes, the Egyptian armor was able to penetrate the Israeli defenses and eventually forced the defenders to surrender late in the afternoon.<sup>14</sup>

### Stalemate

The rebuffs at Ashdod and Negba and the successful capture of Nitzanin brought the initial Egyptian offensive to a close. The first UN cease-fire descended on the combatants on June 11 and lasted til July 9. More importantly, the defeats at Ashdod and Negba had a significant impact on Egyptian morale, as Cairo's troops had originally been very enthusiastic, believing they were going to easily crush the despised Jews. These setbacks caused the Egyptians to begin to doubt that the expedition was going to be the "cakewalk" they had expected. During the cease-fire, the Egyptians reinforced their units in Palestine, bringing their strength to about 15,000 men in four brigades, and both sides fortified their positions along the truce lines. Both Israel and Egypt planned to attack as soon as the truce ended. The Egyptians hoped to widen and strengthen their east-west lines of communication by capturing a number of Israeli settlements that constricted access through the Ashqelon-Hebron corridor. The Israelis hoped to pierce the corridor and then turn west and cut the Egyptian lines along the coast road to encircle the Egyptian forces in Ashdod and Ashqelon.<sup>15</sup>

The Egyptians became aware of the Israeli preparations (it is unclear how) and Mwawi decided to preempt by launching his attack on 8 July, 36 hours before the official end of the truce. By this move the Egyptians surprised the Israelis and succeeded in driving them out of a few minor positions. Meanwhile, the Israelis responded by moving up the start of their offensive, jumping off after dark on 8 July. The Israelis too were able to seize a few minor positions but were defeated by strong fortifications and determined Egyptian defense at their main objectives of Iraq Suwaydan and its police post. The next day the Egyptians launched their main attack against Negba. The Egyptians tried a double envelopment of the town but both thrusts were quickly defeated by the dug-in Israeli defenders. The Egyptians regrouped and then attacked again in force on 12 July. Mwawi employed three infantry battalions, an armored battalion, an artillery battalion and air strikes. In addition, he conducted diversionary attacks against two nearby points to try to draw off Israeli reserves. Tactically, the Egyptians tried essentially the same approach they

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<sup>14</sup> Dupuy, pp. 57-58; Lorch, pp. 216-218.

<sup>15</sup> Dupuy, pp. 80-81; O'Ballance, *The Arab-Israeli War*, p. 137.

had used on 9 July, deploying armor on both flanks to try to break through the Israeli lines and encircle Negba while infantry pinned the Israeli center. However, the various units were unable to synchronize their actions, Egyptian infantry-armor teams never got their cooperation right, and the air and artillery support had little impact, with the result that the Israelis defeated several Egyptian attacks during the course of the day, inflicting over 200 casualties on the Egyptians while suffering only 21 themselves.<sup>16</sup>

There was additional combat between the Egyptians and Israelis before the second truce, but it was of little consequence. The Egyptians attempted to reduce the small Israeli settlement of Binaat Yitzhak which they had earlier masked and bypassed, but were bloodily defeated, losing another 200 casualties to the Israelis.<sup>33</sup> Likewise the Israelis resumed their attacks against the Egyptian fortifications all along the Ashqelon-Hebron road. The Israelis took some minor positions, but failed to take any of the critical strongpoints. Most of the Israeli attacks were poorly conducted frontal assaults that were easily stymied by the Egyptians. The few successes the Israelis enjoyed were instances when the Israelis were able to outflank or otherwise surprise the Egyptians, who reacted poorly whenever the Israelis relied on maneuver or subterfuge.<sup>17</sup>

On 18 July the second truce went into effect. Once again, both sides used the time to reinforce and improve their fortifications. The Egyptian force now boasted nearly 20,000 troops in 13 battalions with 135 tanks, 139 Bren gun carriers, and 90 artillery pieces.<sup>18</sup> Despite the size of this force, Mwawi considered it wholly inadequate to defend his positions and asked Cairo if he could withdraw to more defensible lines. Having largely halted or expelled the other Arab armies, the Israelis were slowly building up their strength opposite the Egyptians and had mustered a force almost twice the size of the Egyptians--albeit not nearly as well armed. Moreover, although the Egyptians had been able to keep open the Ashqelon-Hebron road they had never been able to reduce the Israeli settlements south of it, between the coastal axis and the Beersheba-Hebron road. As a result, Israeli mobile columns based on these settlements constantly raided the Egyptian lines of communication along both axes. The Israeli forces in this huge pocket also constituted a threat to the rear of the positions along the Ashqelon-Hebron road. Despite these strategic problems, Cairo rejected Mwawi's request to pull back.<sup>19</sup>

### **The Israeli Counteroffensives**

On 15 October the Israelis launched Operation Yoav, an offensive designed to drive the Egyptians out of the Negev. The Israelis had concentrated more than three brigades and a small force of artillery and heavy mortars for the operation, and had infiltrated the fresh Yiftach brigade into the Negev pocket--withdrawing the exhausted Hanegev brigade units. The Israelis intended to use the Yiftach to drive west from the Negev pocket to cut the Egyptian coastal axis while the Harel and Givati brigades drove south into the eastern half of the Ashqelon-Hebron road corridor, supported by a diversionary attack from the Negev pocket.<sup>20</sup> The offensive began with a preemptive airstrike by the tiny Israeli Air Force (IAF) against the Egyptian Air Force (EAF) bases in Sinai. Despite the greater size of the EAF, the Israelis surprised the Egyptians and hit their bases without facing any real resistance. Although the IAF caused only modest physical damage--destroying four Egyptian Spitfires, cratering a runway, and damaging a few buildings--the shock of the raids kept the EAF on the ground for almost three days, during which the IAF had undisputed control of the air.<sup>21</sup>

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<sup>16</sup> Dupuy, p. 81; O'Ballance, *The Arab-Israeli War*, p. 141.

<sup>17</sup> Dupuy, pp. 82-83.

<sup>18</sup> Dupuy, p. 92; Lorch, pp. 335-336.

<sup>19</sup> Dupuy, pp. 91-92; Lorch, pp. 335-336.

<sup>20</sup> Dupuy, pp. 93-95.

<sup>21</sup> Colonel Eliezer Cohen, *Israel's Best Defense*, Translated by Jonathan Cordis, (NY: Orion Books, 1993),

The Yiftach brigade's attack against the coastal axis caught the Egyptians by surprise in a lightly defended sector. The IDF infiltrated the Egyptian positions and outflanked and overran the Egyptian strongpoints. Nearby reserves failed to move to support the threatened sectors with the result that the Israelis tore a sizable hole in the Egyptian defensive lines. The Israelis were able to cut the coastal road, but fierce resistance by an Egyptian unit well-fortified at Beit Hanun prevented them from reaching the sea and completely cutting off the Egyptian troops in Ashdod and Ashqelon. Mwawi recognized the threat to these forces and began pulling them back. The Beit Hanun position was able to hold out long enough to allow Egyptian engineers to build an emergency road along the beaches of the Gaza strip and so withdraw the reinforced brigade deployed around Ashdod.<sup>22</sup> Natanel Lorch has remarked about their efforts that, "Egyptian engineers demonstrated a degree of initiative and improvising ability completely at variance with that shown by their commanders."<sup>23</sup>

The Israeli attack against the Egyptian east-west corridor did not proceed as smoothly. The Egyptian fortifications proved quite formidable and the Egyptians had taken advantage of the British-built police forts along the route--which were virtually impregnable given the limited firepower available to the Israelis. The Egyptian soldiers, commanded by the very able Sudanese Brigadier General Muhammad Said Taha Bey, fought tenaciously. Moreover, the Egyptians had used the cease-fire to pre-plan artillery fire missions and pre-register their guns on key terrain features, with the result that when the Israelis attacked, the Egyptian artillery fire proved lethal for the first time. The Israelis made little progress and could not budge the Egyptians from their main defensive positions. In response, the Israeli high command shifted the axis of attack from the eastern end of the corridor to the western end. Here the Israelis took the defenders by surprise, and were able to find exposed flanks they could use to slice into the Egyptian lines. There were fewer Egyptian strongpoints in the western half of the corridor, and these were not as formidable as the ones farther east. In the course of a single night, the Israelis took the three main Egyptian strongpoints and cut through most of the corridor. Egyptian tactical reserves in the area did not counterattack to seal the breach and the Israelis were able to break through and link up with the forces in the Negev pocket. Taking advantage of this development, the Israelis then brought down forces from the Jerusalem area which attacked and took Beersheba, thereby isolating the Egyptian forces south of Jerusalem as well as those defending the eastern half of what had been the east-west corridor. These isolated forces, amounting to about a reinforced brigade, concentrated around the Negev town of Fallujah.<sup>24</sup>

As a result of this defeat, General Mwawi was relieved of his command. His replacement, Major General Sadiq decided to shorten his lines, falling back on Gaza in the west and on Asluj in the east. The Israelis attempted a number of attacks to reduce the Fallujah pocket and while these succeeded in nibbling away at the Egyptian position, the Egyptians clung to their fortifications and fought incredibly hard. On the other side, the Egyptians made several half-hearted attempts to break through the Israeli lines to relieve the trapped forces, but their offensives consisted of small frontal assaults that were quickly halted after meeting strong resistance from the Israelis.<sup>25</sup>

In late December 1948, the Israelis launched Operation Horev to clear the Negev of the remaining Egyptian forces. The offensive began on 22 December with the Israeli Golani brigade attacking all along the coastal axis as a diversion to draw off Egyptian attention and reserves. Meanwhile, on 23 December, the main attack took place in the east,

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pp. 50-52; Lorch, p. 343; Ehud Yonay, *No Margin for Error: The Making of the Israeli Air Force*, (NY: Pantheon, 1993), pp. 54-55.

<sup>22</sup> Dupuy, pp. 93-99; Lorch, pp. 351-352.

<sup>23</sup> Lorch, p. 351.

<sup>24</sup> Dupuy, pp. 94-99; Lorch, pp. 345-355; O'Ballance, *The Arab-Israeli War*, pp. 174-179.

<sup>25</sup> Dupuy, pp. 105-108.

along the Beersheba axis. An Israeli brigade outflanked the Egyptian position at Asluj by following an ancient Roman road that no longer existed on maps but which the Israelis had discovered and had their engineers restore to a trafficable state. This Israeli force turned south and attacked the Egyptian strongpoint at al-Aujah at the base of the Egyptian salient protruding into the Negev. Although the defenders were surprised by this sudden move, they fought very hard, repulsing attacks by the Israelis from all directions over the course of the next two days. Meanwhile, the garrison at Asluj had done nothing during this time: it had not sent reinforcements to aid the forces at al-Aujah, it had not pulled back to avoid being trapped should al-Aujah fall, it had not redeployed forces along the road to the south either to cut the line of supply of the Israeli units attacking al-Aujah or to prevent additional Israeli forces from using the same route; nor had it even built all-around defenses to protect the rear of its fortifications. Consequently, on 26 December another Israeli column moved along the old Roman road, turned north and assaulted the Asluj defensive lines from the rear. The Egyptians fought hard but were quickly defeated by the Israelis. That night, Cairo ordered its troops in al-Aujah to abandon their position and retreat. Having secured al-Aujah, the Israelis then put into effect the second part of their plan, pushing west and northwest from al-Aujah into the Sinai to take Qusaymah, Abu Ageilah, B'ir Lafhan, and al-'Arish. The Israelis raced through the Sinai, facing only light resistance which they brushed aside, and seized the airfield at al-'Arish, capturing several Egyptian aircraft. However, when the Israelis finally reached the Egyptian fortified positions around the town they were exhausted and the Egyptians not only were rested, but had been alerted to the approaching enemy and had manned their defenses. After a few probing attacks, the Israeli commanders on the spot decided they did not have the force on hand to take on the al-'Arish position and dug-in to await the reinforcements then rushing to meet them. Before the Israelis could mount their attack however, London warned Israel to withdraw from Sinai or the British would invoke their security treaty with Egypt and commit combat forces against the Israelis. To put teeth into these threats, the British began moving troops from their bases in Suez and flying combat aircraft over the Sinai and Negev. These British moves prompted Tel Aviv to call off the attack on al-'Arish and pull its troops back to the Negev. For all intents and purposes, the Israeli withdrawal from Sinai on 4-6 January ended Egyptian involvement in the first Arab-Israeli war. As part of the eventual cease-fire agreement, the Egyptian troops trapped with General Taha at Fallujah were allowed to return to Israel with their arms.<sup>26</sup>

### **General Observations on Egyptian Military Effectiveness in the War of Israeli Independence**

The performance of Egyptian units during the fighting in 1948 showed some significant strengths and fatal weaknesses. At the tactical level, the Egyptians undoubtedly showed more of the latter than the former. At the strategic level, Egyptian performance was reasonably competent if unspectacular.

#### *Tactical Performance*

On the plus side, Egyptian soldiers were quite courageous, conducting repeated frontal assaults into very accurate Israeli fire and hanging tough in extremely precarious defensive positions. The conduct of the Egyptian troops in the Fallujah pocket in particular stands out. These forces stuck together, fought ferociously, and would not surrender despite being completely cut off by superior Israeli forces. Egyptian forces also did well in set-piece operations that they had had time to plan and practice beforehand. In these cases, as long as the operation was kept limited and there were few unforeseen contingencies, the Egyptians did quite well--such as at Nitzanin and the last day of fighting at Yad Mordechai. Egyptian engineers did a creditable job both in building very effective fortifications and in

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<sup>26</sup> Dupuy, pp. 108-113; Lorch, pp. 406-430; O'Ballance, *The Arab-Israeli War*, pp. 196-200.

quickly improvising a make-shift road that allowed the Egyptian forces trapped at Ashdod to retreat out over the beaches of Gaza. Egyptian logistics were unspectacular, but were never a hindrance to combat operations.

On the other hand, Egypt's forces consistently manifested a number of patterns of behavior in combat that severely hampered their effectiveness. Foremost was the crippling dearth of imagination and aggressiveness among Egyptian junior officers. Time and again, Egyptian forces did not react to unexpected Israeli actions, and when they did react their moves were slow and predictable. The situation at Asluj, where the Egyptians sat motionless for two days while the Israelis outflanked them and attacked al-Aujah to their rear, is only the most egregious example of this behavior. Egyptian commanders rarely tried to employ maneuver, either to outflank Israeli positions or to prevent the Israelis from outflanking them. Egyptian tanks fought as mobile artillery pieces, charging straight at Israeli positions when attacking, and sitting motionless in prepared positions when defending, with little effort to maneuver into an advantageous position in either situation.

Egyptian combined arms was largely non-existent as armor, infantry and artillery rarely were able to coordinate their efforts effectively even when they actively tried to do so. However, on the few occasions when they made that coordination work, they achieved decisive results. Egyptian artillery proved very effective when the Egyptians were defending fortified lines and had a month to carefully site and pre-register their guns, but were incapable of providing support during the initial invasion, whenever Israeli attacks penetrated the Egyptian defensive lines, or when the Israelis simply came at them from an unexpected route. The Egyptian gunners could not shift fire to deal with fluid situations such as meeting engagements. Israeli General Ariel Sharon summed up his impression of Egyptian tactical performance in the 1948 war by remarking that, "Once you allow them to fight a battle they are prepared for, a battle they have rehearsed, they will fight courageously. They are quite capable of dying at their posts, and did exactly that on many occasions. But they don't like to be surprised."<sup>27</sup>

### *Strategic Performance*

The Egyptians generally blamed their failure during the 1948 war on poor strategic leadership. I find this claim hard to support. First, General Mawawi seems to have done a reasonably good job, and in some ways was very competent. During his initial advance he tried hard to keep moving and, rather than being halted by the inability of his forces to defeat the tiny garrisons of the Israeli settlements along the way, he masked them and kept moving. Although his column did move painfully slowly--taking 15 days to cover the 60-70 kilometers between Rafah and Ashdod against minor resistance--the fact that he did consistently bypass the settlements along the way for the sake of not becoming bogged down suggests that the sluggish pace was not his choice, but more likely reflected the limitations of the forces under his command. On several occasions, he tried to maintain his momentum by launching immediate assaults on Israeli positions directly from the route of march, but these failed on every occasion. On at least three occasions he correctly recognized that his position was dangerously extended and had to be tightened up: first at Ashdod in late May, when he reined in his scattered forces after the Israelis finally concentrated sufficient force to stop his forward progress and threaten his flank; in October, when he was planning the defense of the entire Negev and realized his forces were spread too thin to resist the impending Israeli assault; and finally later that month, after the Israelis had broken through his western defenses and were threatening to cut the coastal axis and isolate his forces at Ashdod and Ashqelon. Mawawi also seems to have had a good grasp of combined arms operations. This can be seen in the fact that the only attacks in which the Egyptians were able to effectively coordinate their armor, infantry and artillery were those under Mawawi's personal direction and in which he spent several days

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<sup>27</sup> Ariel Sharon with David Chanoff, *Warrior: The Autobiography of Ariel Sharon*, (NY: Simon and Schuster, 1989), p. 96.



beforehand going over the assault with his troops. In all of the attacks conducted by other Egyptian commanders, and in all of the attacks led by Mwawi but conducted without a preparation period of several days, Egyptian forces showed no ability to effectively integrate their various combat arms. On the other hand, while Mwawi cannot be faulted for the unwillingness or inability of the forces under his command to maneuver in battle, it is also the case that most of the attacks he directed failed to employ operational level maneuvers to strike at the flank of Israeli positions.

Overall, Mwawi appears to have been a competent, although perhaps not brilliant, commander, whose greatest problem was the limitations of the forces under his command. The campaign strategy itself was fairly pedestrian and more creative approaches might have been employed. However, had the Egyptians been able to move faster and more forcefully, and driven up the coast to take Tel Aviv while simultaneously cutting the Jerusalem corridor from the south as originally envisioned, there is no question that these would have been enormous problems for the Israelis, and could have led to their general defeat. Thus the strategy itself was not necessarily the problem, instead it was the inability of Egypt's armies to execute the strategy.

Another claim offered up by the Egyptians for their defeat in 1948 is the obsolescence and general poor quality of their weaponry. This excuse also rings hollow. The Egyptians consistently deployed far greater firepower and mobility than the Israelis. In both numbers and quality of operational weapons, there was no time at which the Egyptians did not outnumber the Israelis, and except during the final Israeli offensives, this superiority was usually very great. It may well be that Egypt could have secured even greater force ratios in their favor and employed even more powerful weapons. However, the quality and quantity of weapons they actually possessed should have been more than adequate to defeat the Israelis had Egyptian tactical formations performed better.

### **The Sinai-Suez War, 1956**

Against the combined armies of Israel, Britain and France in 1956, Egyptian forces performed almost identically as they had in 1948. Egyptian strategic direction was adequate, albeit unspectacular, and Egyptian tactical performance showed the same fatal inability to deal with a fast-moving, fluid battlefield. The Egyptian armed forces were clearly a praetorian military in 1956, having overthrown the monarchy in a coup in 1952. However, because those Free Officer's given political posts left their military positions behind, the Egyptian armed forces did not suffer overly from the effects of praetorianism. The coup also alleviated some of the problems of palace-guardism because the Free Officers took control of the government with the specific purpose of revamping the military to defeat Israel. By contrast, commissarism began to be a significant factor in Egyptian military life as the new ruling junta purged the officer corps of its opponents and took other actions to ensure the loyalty of the armed forces. In 1955, the Egyptians began importing Soviet equipment and the first bits of Soviet military practices, but when war came in 1956, the Egyptian army and air forces still relied overwhelmingly on British doctrine and tactics.

### **Politicization**

Defeat at the hands of the Israelis proved disastrous for the Egyptian monarchy. The Army believed that it had been betrayed by the King and his generals. They felt they had been saddled with inferior and out of date equipment and had suffered from poor leadership. In addition, those trapped in the Fallujah pocket were especially bitter that they had fought so stubbornly but had never been relieved. These various gripes led to the formation of the cabal of the Free Officers who, under the leadership of Colonel Gamal 'Abd al-Nasser, overthrew the monarchy in 1952. Most of the Free Officers were junior officers below the rank of colonel. Because they felt the need for someone with greater



authority, they initially enlisted the support of Major General Muhammad Naguib, who had won a good reputation in the fighting in Palestine. Naguib was made president of the new Republic, because the Free Officers felt that they needed a senior officer to lend credibility to their claims that the Army was acting as a collective on behalf of "the people."

One of the first acts of the new "Republican" government was to purge many of the colonels and every general officer from the Egyptian armed forces except Naguib and one brigadier general. Most were simply forced to retire, however, some were put on trial for their "crimes" during the War of Israeli Independence.<sup>28</sup> A power struggle then ensued, principally between Nasser's faction and Naguib's faction--supported by the Islamist group, the Muslim Brotherhood--in which Nasser prevailed. By 1954, Nasser was undisputed ruler of Egypt.<sup>29</sup>

Nasser's ascendancy and the motivations behind the Free Officers' coup brought about far-reaching changes in the military. At least during its initial years in power, the regime clearly was a praetorian state with military officers running the government because of their position within the Egyptian armed forces. However, the problems of praetorianism abated fairly quickly as Nasser was content to leave military affairs in the hands of his senior military commanders and concentrate primarily on political issues. This was true of most of the officers Nasser appointed to the various non-military cabinet and bureaucratic posts: they basically left their military posts behind and gave their full attention to their new tasks. Thus the military did not suffer from many of the problems normally associated with praetorianism because the senior military commanders were not simultaneously trying to run the armed forces and the government.<sup>30</sup>

Although the Egyptian military suffered little from the effects of praetorianism, the same cannot be said with regard to commissarism. At least initially, Nasser recognized that his hold on power was wholly derived from his control of the Army, and beginning with the purge of the general officers, he moved to ensure its loyalty to him. He appointed many Free Officers to senior positions in the military. In particular, he made his close friend Major 'Abd al-Hakim Amer Commander in Chief of the Armed Forces, and promoted him to the rank of major general. Amer had fought well in 1948, serving as an artillery officer and distinguishing himself in the fighting in the Fallujah pocket. Amer and Nasser had become very close there and Amer had served as Nasser's trusted lieutenant ever since. Once in charge of the armed forces, Amer set about appointing not merely Free Officers but principally those Free Officers with kinship or other group ties to himself and Nasser throughout the command structure.<sup>31</sup>

Paradoxically, Nasser and Amer also began stressing the professionalization of the officer corps and otherwise moving to improve Egypt's military power. While loyalty was a key consideration for promotion, by choosing competent officers from among those with kinship or other ties to himself or Nasser, Amer was able to begin improving the overall competence of the Egyptian officer corps while still ensuring its loyalty.<sup>32</sup> Although Nasser still relied on the Army for internal security and to maintain his regime in power, the burning desire to avenge the defeat of 1948 prompted Cairo to simultaneously emphasize the external security mission of the military. Nasser also had fairly grandiose ambitions for Egypt on the world stage, and he saw military power as a crucial tool for this task, further stimulating the armed forces to focus on conventional combat with foreign militaries.

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<sup>28</sup> Be'eri, pp. 89-108; Vatikiotis, pp. 373-384.

<sup>29</sup> Vatikiotis, pp. 384-388.

<sup>30</sup> Be'eri, pp. 106-108; Herman Frederick Eilts, "Commentary: Defense Planning in Egypt," in Stephanie G. Neuman, *Defense-Planning in Less-Industrialized States*, (Lexington, MA: Lexington Books, 1984), p. 178.

<sup>31</sup> Be'eri, pp. 106-108, 322; Amos Perlmutter, *Egypt: The Praetorian State*, (New Brunswick: Transaction Books, 1974), p. 115.

<sup>32</sup> Eilts, p. 178; Perlmutter, p. 175.

Under the monarchy, internal security had been the primary mission of the armed forces and external security only a distant second. While the Egyptian military did train for conventional combat, this training was lackadaisical and reflected its low priority. Nasser and Amer reinvigorated this training, and the mission of defeating foreign foes, especially Israel, became at least as important as the Army's internal security function.<sup>33</sup>

This change in priorities was reflected in several ways. First, the government began to commit a growing proportion of resources toward preparing the military for war with Israel. Defense spending increased from 3.9 percent of Egyptian GNP in 1950-51 to 8.4 percent in 1955-56.<sup>34</sup> As Michael Barnett notes in his exhaustive study of Egyptian and Israeli military expenditures, "Defense spending climbed over this period [1952-1956] as Nasser was intent on creating a modern military that could both confront Egypt's potential enemies and signal to regional and global actors that Egypt had reemerged on the scene and recovered from years of colonial tutelage."<sup>35</sup> Nasser also brought in a team of 80 former German *Wehrmacht* officers to reform the Egyptian Army. The mission was led by Colonel General Wilhelm Frambecher, one-time inspector general of German artillery. The Germans revised Egyptian training, supervised the construction of defenses in Sinai, drew up plans for Egyptian defense strategy against Israel, and outlined changes to the organization and equipping of Egyptian units. German officers also were attached as field advisers to major Egyptian combat units. The German influence was less than originally hoped because the Egyptians rarely adopted the German measures in full and sometimes ignored them altogether. Nevertheless, the far-reaching writ of the German advisory mission reflected Cairo's fervent commitment to improving the effectiveness of its forces.<sup>36</sup> The eviction of the British from their bases in Suez in 1955 added impetus to this drive because it deprived Cairo of British protection, and so angered London that it created another powerful enemy threatening to use force against Egypt.<sup>37</sup>

### Sovietization

In 1955, Nasser turned to the Soviet Union for the weapons he believed he needed to build a military capable of defeating Israel and asserting Egypt's place on the world stage. Immediately after the War of Israeli Independence, the United States had persuaded France and Britain to join it in refusing to sell major weapons systems to any of the Middle East states to try to prevent the outbreak of future wars. By turning to the USSR, Nasser was able to circumvent this embargo and on 27 October 1955 Egypt secured the purchase of modern weaponry from the Soviet Union via Czechoslovakia. The "Czech arms deal" was a major boost to Egypt's arsenal and gave it considerable superiority over Israel, at least on paper. By October 1956, Egypt had received 230 tanks (primarily T-34/85s), 200 APCs (mostly BTRs), 100 Su-100 self-propelled guns, 500 artillery pieces, 200 jet aircraft (120 MiG-15s, 50 Il-28s, and 20 Il-14s), as well as several destroyers, submarines and motor torpedo boats.

The infusion of Soviet weaponry threatened to completely overturn the regional balance. For example, prior to the Czech arms deal, Egypt and Israel had had less than 200 tanks apiece. Moreover, the T-34/85s Egypt was receiving were far superior to any tank then in either arsenal. Most of Egypt's tanks were British surplus from the Second World War, while most of the Israeli tanks were M-4A3 Shermans the IDF had scrounged from

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<sup>33</sup> Michael N. Barnett, *Confronting the Costs of War: Military Power, State, and Society in Egypt and Israel*, (Princeton: Princeton University Press, 1992), p. 87; Safran, *From War to War*, pp. 206-207.

<sup>34</sup> Barnett p. 81.

<sup>35</sup> Barnett, p. 87.

<sup>36</sup> Yonah Bandman, "The Egyptian Armed Forces During the Kadesh Campaign," in Selwyn I. Tröen and Moshe Shemesh eds., *The Suez-Sinai Crisis 1956: Retrospective and Reappraisal*, (London: Frank Cass and Co., 1990), pp. 75-77; Keith Kyle, *Suez*, (NY: St. Martin's, 1991), p. 351.

<sup>37</sup> Safran, *From War to War*, p. 207.

postwar scrap heaps. Similarly, before the Russian deal, Egypt possessed 80 old British jet aircraft (mostly Vampires) while Israel boasted only 50 early-model French jets (Ouragons and Meteors). Thus Cairo's new MiGs and Ilyushins not only outnumbered the Israeli Air Force four-to-one, but also were far more capable aircraft.<sup>38</sup>

Soviet contributions to the Egyptian war effort were largely confined to weapons deliveries before 1956. Egyptian organization and doctrine was still overwhelmingly British, although elements of the old Turkish system lingered on in many areas.<sup>39</sup> Beyond the British, the major foreign influence on the Egyptians was the Germans, who labored mightily to reshape the Egyptian army in the image of the *Wehrmacht*, going so far as to persuade the Egyptians to reorganize one of their mechanized infantry brigades along the lines of a panzergrenadier regiment, although they failed to persuade Cairo to defend Sinai along the lines of the defense-in-depth strategies Guderian and Manstein had employed in Russia in 1943 and 1944.<sup>40</sup> Soviet influences were negligible, being confined largely to weapons' operation and maintenance. Nevertheless, even in this limited area, the Soviets were quickly frustrated by the slowness of their Egyptian pupils to learn to use very simple Soviet equipment.<sup>41</sup>

### The Armies on the Eve of War

In the fall of 1956 a crisis was clearly brewing in the Middle East, however, it was unclear as to whom it might embroil in war. Britain, and to a lesser extent France, were seething over the loss of Suez and were threatening Egypt with everything from an international "Canal-users" commission to oversee the canal, to direct military action. All of the Arab states were regularly proclaiming their intent to destroy the state of Israel, and Egypt, Syria, and Jordan were all permitting--if not supporting and encouraging--Palestinian attacks on Israel from their territory. Israel was particularly concerned by the massive augmentation of the Egyptian military provided by the Czech arms deal and the efforts of Egypt's German advisers. Despite Israel's lingering hatred of the British from their experiences during the British mandate over Palestine, Britain and France were able to secure secret Israeli participation in a scheme to retake the Suez. Essentially, the plan was for Israel to invade the Sinai and threaten Suez, giving Britain and France an excuse to intervene as neutrals to secure the canal and disentangle the combatants. This agreement provided London and Paris with an excuse to retake Suez and gave Tel Aviv the opportunity to crush the Egyptian army with British and French aid before Egypt could fully assimilate its new Soviet weapons.<sup>42</sup>

In the summer of 1956, Egyptian military intelligence concluded that Israel might conduct one or more raids against Palestinian training camps in Sinai but would not launch a full-scale invasion. The Israelis had carefully created the impression that they were preparing for an invasion of Jordan, going so far as to mass most of their military power along the Jordanian border.<sup>43</sup> Based on this false assessment, Cairo concentrated the majority of its forces in the Nile delta to guard against a possible British invasion to retake the canal and/or overthrow Nasser's government. Only about 30,000 of Egypt's 90,000

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<sup>38</sup> Moshe Dayan, *Diary of the Sinai Campaign*, First Paperback edition, (NY: Shocken Books, 1967), pp. 4-5; and Nadav Safran, *From War to War*, (NY: Pegasus, 1969), p. 209.

<sup>39</sup> Bandman, p. 75; Cordesman, *The Arab-Israeli Military Balance*, p. 23; Kennett Love, *Suez: The Twice-Fought War*, (NY: McGraw Hill Book Company, 1969), p. 491; Safran, *From War to War*, p. 210.

<sup>40</sup> Bandman, pp. 75-77; Kyle, p. 351.

<sup>41</sup> Anthony Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, (Lanham, MD: University Press, 1987), p. 23.

<sup>42</sup> On the intricate diplomacy and planning preceding the 1956 war see General D'Armee André Beaufre, *The Suez Expedition, 1956*, Translated by Richard Barry, (NY: Praeger, 1969); Dayan, *Diary of the Sinai Campaign*, Op. cit.; Roy Fullick and Geoffrey Powell, *Suez: The Double War*, (London: Hamish Hamilton, 1979); Kyle, *Suez*, Op. cit.; Love, *Suez: The Twice-Fought War*, Op. cit.

<sup>43</sup> Bandman, p. 79.

troops were deployed in Sinai.<sup>44</sup> This was far less than had been envisioned in Frambecher's plan for the defense of Sinai. Frambecher had planned a defense-in-depth involving two infantry divisions covering the border area, two more infantry divisions deployed in depth along the major east-west roads of the Sinai, and an armored division in reserve to counterattack the major Israeli attack when it was identified. In addition, several battalions were to cover the crucial Mitla and B'ir Gifgafah passes as a final line of defense.<sup>45</sup> Instead, Egypt deployed only two infantry divisions (one of them a Palestinian division of dubious reliability), an independent armored battalion, a National Guard brigade, and various miscellaneous units to hold Sinai.<sup>46</sup> These forces were inadequate to execute Frambecher's plan and so instead both infantry divisions were concentrated in northeast Sinai--the 3rd at al-'Arish, Rafah, and Abu Ageilah, and the 8th Palestinian in the Gaza strip--leaving the National Guard brigade to defend the rest of the border. The armor was parceled out among the infantry units, and virtually nothing was left in operational reserve.<sup>47</sup>

Despite this significant change in plans, the Egyptians were hardly defenseless. They had built very extensive fortifications in Sinai, especially at Rafah and Abu Ageilah where their German advisers had done much of the design and had supervised the construction process.<sup>48</sup> All of the major road junctions, axes of advance, and key communication nodes were prepared with concertina wire, mines and defensive positions and either were manned or were ready to be manned. The Egyptian units had been in their Sinai positions for many months and had repeatedly exercised their defensive plans. Cairo had carefully planned counterattacks for all of its local reserves in Sinai--often with German assistance--and the reserves had rehearsed these moves many times.<sup>49</sup> Moreover, two of Egypt's infantry divisions and its armored division were deployed just across the canal, mainly in the Ismailia area, and could quickly cross back into Sinai.<sup>50</sup>

On the other side, the Israelis had concentrated 45,000 troops in 10 brigades--including one armored and three mechanized brigades--for the invasion of Sinai. The Israeli plan was to use a force of three brigades in the primary thrust to take the heavily fortified Egyptian positions at Umm Qatef/Abu Ageilah and then push through the central Sinai. The invasion would begin with a secondary thrust, relying on a parachute drop by one battalion of the 202nd Parachute Brigade at the Mitla pass, after which, the rest of brigade, led by its commander Ariel Sharon, would travel overland to link up with the battalion and seize or block the Mitla. Later, another three brigades would take Gaza and the al-'Arish area and then push on along the northern route to Suez. Finally, another brigade would wind its way down the tortuous mountain path along Sinai's eastern shore to capture the Egyptian position at Sharm al-Shaykh, from which the Egyptians had blockaded all maritime traffic heading to the Israeli port of Eilat. The other two brigades would remain in reserve.<sup>51</sup>

### **The Israeli Offensive**

The Israeli invasion began in the evening of 29 October with the parachute drop at the eastern end of the Mitla pass. The battalion quickly secured the mouth of the pass and

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<sup>44</sup> Love, p. 492.

<sup>45</sup> Bandman, pp. 76-78.

<sup>46</sup> Love, p. 496.

<sup>47</sup> Dupuy, pp. 146-147.

<sup>48</sup> George W. Gawrych, *Key to the Sinai: The Battles for Abu Ageilah in the 1956 and 1967 Arab-Israeli Wars*, (Fort Leavenworth, KS: US Army CGSC, 1989), p. VII; Kyle, p. 351.

<sup>49</sup> Gawrych, *Key to the Sinai*, pp. 14-19; Rechavam Zeevy, "The Military Lessons of the Sinai Campaign," in Tröen and Shemesh eds., p. 70.

<sup>50</sup> Bandman, p. 81.

<sup>51</sup> Dupuy, pp. 147-150.

dug-in for the night. Early the next morning, the rest of Sharon's brigade-task force linked up with the battalion at the Mitla pass after brushing aside minor Egyptian resistance along the way. Over the next few days the Israelis attempted to take control of the pass. The Egyptians fought back ferociously, trapping an Israeli unit in the pass below them. Sharon was forced to clear the two sides of the eastern end of the pass ledge by ledge and cave by cave and was able to extract his troops only with heavy casualties. Afterwards, the Israelis pulled back from the mouth of the pass, blocking it, but leaving it in Egyptian hands.<sup>52</sup>

Meanwhile, Egyptian intelligence had been completely fooled by the operation, and for about twelve hours after the initial airdrop still had not figured out the size and intent of the Israeli operation.<sup>53</sup> The Egyptian General Staff did not wait for its intelligence service to come up with a conclusion. Amer, Nasser, and the Sinai front commander all concluded quickly after the initial reports came in of the paradrop and of Sharon's brigade crossing the border at al-Kuntillah that this was a major Israeli attack. The Sinai commander had already ordered an infantry brigade near Ismailia to begin heading for the Mitla pass (this was the force Sharon encountered there) and the General Staff then ordered the 4th Armored Division to move immediately to B'ir Gifgafah in central Sinai and counterattack the main Israeli thrust when it was identified.<sup>54</sup>

South of Abu Ageilah on the first night of the war, the Israeli 4th Infantry Brigade overran the Egyptian positions at Qusaymah, where the defenders simply broke and ran, and then part of this force continued on into central Sinai to screen the flank of Sharon's advance to the Mitla farther south.<sup>55</sup> With their southern flank secured, the Israelis then launched their assault against the Abu Ageilah position itself. The 10th Infantry Brigade attacked the main Egyptian positions on the fortified hill of Umm Qatef guarding the entrance to the Abu Ageilah position during the night of 30/31 October. The Israeli attack was miserable: a slow, disjointed frontal assault directly at the Egyptian positions which the Egyptians beat back easily. Meanwhile, an understrength Israeli battalion under Lt. Colonel Avraham "Bren" Adan consisting of a company of infantry in half-tracks and a company of Sherman tanks had wormed its way into the rear of the Egyptian position and in conjunction with the infantry assault on the two eastern hills, Adan began attacking the rear area of the Abu Ageilah defenses. The defensive position was too big and intricate, however, and it was too well manned for Adan's small force to significantly affect the course of the fighting farther east at the two hills.<sup>56</sup>

Over the next two days the Israelis repeatedly assaulted the Umm Qatef positions, first with 10th Infantry Brigade and elements of the 4th Infantry brigade and later with the 37th Mechanized Brigade as well. However, the Israeli attacks were terribly inept, failing to coordinate the actions of their various units, moving slowly, conducting one frontal assault after another, and frequently attacking without proper combined arms cooperation. The Egyptians fought back hard, would not relinquish their positions and inflicted heavy casualties on each Israeli attack. Meanwhile, Adan's tiny force fought on in the rear of the Abu Ageilah position, securing the vital crossroads, blocking a large Egyptian force moving south from al-'Arish to reinforce the Abu Ageilah positions, and then attempting to penetrate the Egyptian defenses from the rear. Although Adan's force was too small to break through the dug-in Egyptian defenders at the Ruafah dam guarding the rear of the units at Um Qatef, he defeated a counterattack by two battalions moving south to reinforce Abu Ageilah from al-'Arish. At first, Adan was wary of this much larger force, but after their initial repulse, the Egyptians dug-in and made no effort to move again, thus freeing

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<sup>52</sup> Dayan, pp. 100-103; Dupuy, pp. 172-174; Chaim Herzog, *The Arab-Israeli Wars*, (NY: Random House, 1982), p. 127; Love, p. 509; Sharon, pp. 147-151.

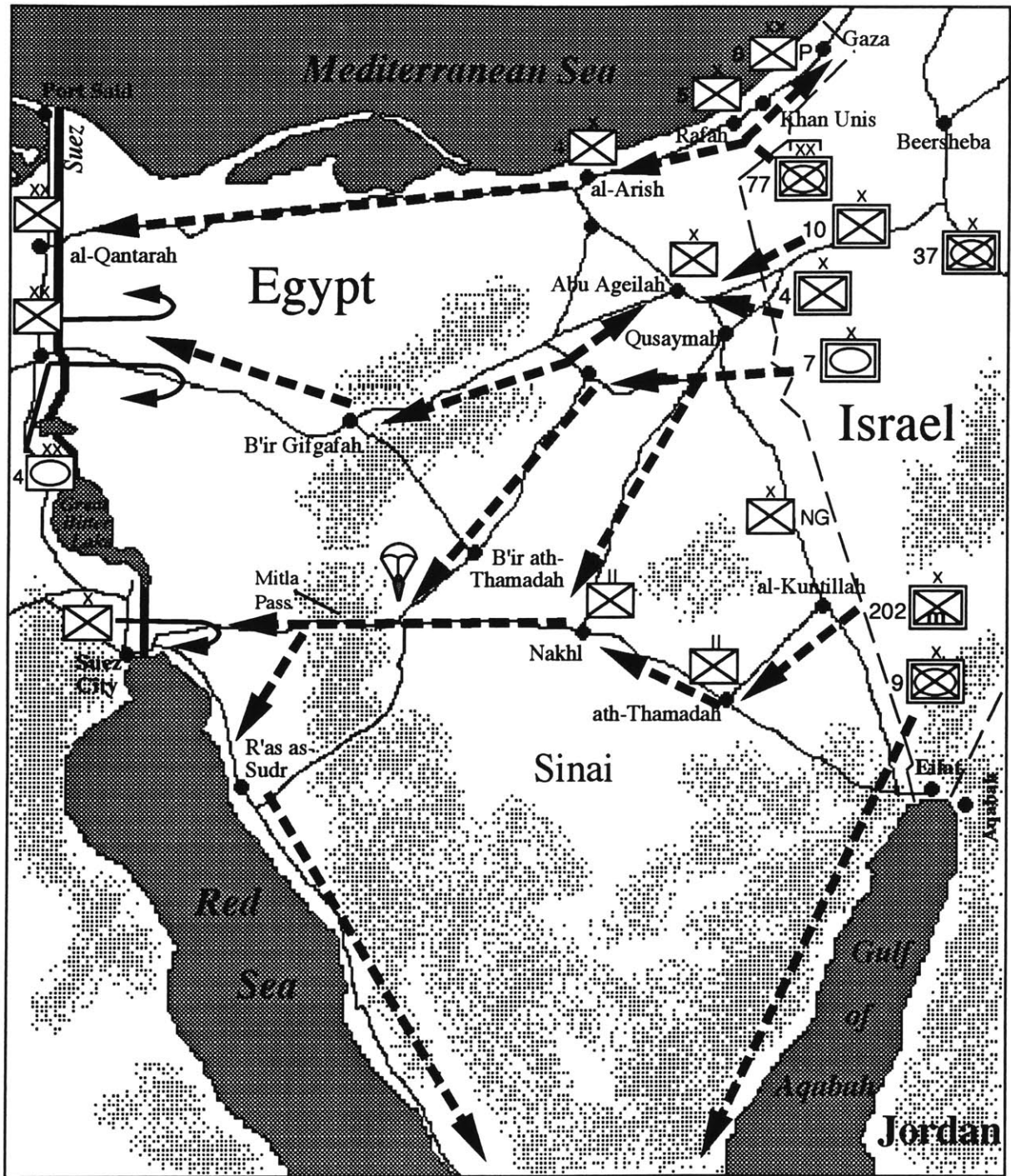
<sup>53</sup> Bandman, p. 84; Herzog, *The Arab-Israeli Wars*, p. 118.

<sup>54</sup> Bandman, p. 84; Dupuy, pp. 154-155; Gawrych, *Key to the Sinai*, pp. 33-35.

<sup>55</sup> Dayan, p. 87.

<sup>56</sup> Bandman, p. 92; Dayan, pp. 105-107; Dupuy, pp. 164-166; Gawrych, *Key to the Sinai*, pp. 45-50.

# The Israeli Conquest of Sinai, October 1956



— - Egyptian moves, later countermanded

--- - Israeli attacks

□ - Egyptian units

□ - Israeli units

the Israelis to continue pressuring the Ruafah dam.<sup>57</sup> Nevertheless, the Israelis were never able to reduce the Umm Qatef positions which only fell after Nasser ordered all Egyptian forces to withdraw from Sinai on 1 November.<sup>58</sup>

While Adan was battling the Egyptians around Abu Ageilah, the rest of his parent unit, the 7th Armored Brigade, had pushed on west of Abu Ageilah on the main road to Ismailia. Reports of Israeli armor operating near B'ir Gifgafah prompted the Egyptian General Staff to order 4th Armored Division to attack eastward to clear this critical road. However, the 4th moved extremely slowly, in part because of incessant raids by the IAF. On the 31st, Tel Aviv reined in the 7th Armored Brigade because it was suspicious of the British and wanted to make sure they and the French were going to invade--as they had agreed--before Israeli ground forces became too deeply entangled in Sinai. During the early evening of 31 October the British and French began their airstrikes against the Egyptian Air Force bases. Despite the combat with Israel, the EAF was not flying combat air patrol missions and its planes were caught on the ground and largely in the open. Over the course of the next three days, British and French airstrikes destroyed over 150 Egyptian aircraft on the ground while facing only minor resistance from the Egyptians. The most the EAF did was to fly about 40 aircraft to bases in southern Egypt where they were out of range of the European planes--but were also unable to contribute to the fighting either in Sinai or the canal zone.<sup>59</sup>

Nasser and the Egyptian GHQ correctly read the British and French air raids as the opening phase of an amphibious assault. Nasser ordered an immediate retreat from Sinai to concentrate all of his forces for a defense of Cairo and the canal. This order reached the troops in Sinai at various times on 1 November. Of greatest importance, the 4th Armored Division immediately turned around and headed back over the canal, freeing up the central axis through Sinai and allowing the Israeli 7th Armored Brigade to push ahead without resistance.<sup>60</sup>

With British and French participation now assured, Tel Aviv launched its assault on northern Sinai. Here the Israelis intended to break through the Egyptian defenses at Rafah at the base of the Gaza strip, then while the main force headed west to the canal via al-'Arish, other elements would turn northeast and clear the rest of the Gaza strip from behind. The Egyptian defenses around Rafah were extremely formidable, consisting of at least three belts of mines in front of numerous reinforcing strongpoints built on a series of hills east of the main roads. The Israelis punched through these lines to the south and east of Rafah during the early morning hours of 1 November. Resistance was very spotty. In some areas the Egyptians fought fairly hard, forcing the Israelis to breach their lines and reduce their positions before they would retreat or surrender. At other points, however, the Egyptians simply abandoned their positions after only very brief resistance or sometimes without a fight at all. At no point were the Israelis counterattacked, nor did the Egyptian strongpoints coordinate their defensive operations to aid one another against Israeli flank attacks. Egyptian artillery laid down heavy barrages in front of the defensive lines, but because the Israelis generally were able to find alternative routes of advance which the Egyptian artillery could not shift to cover, their fire caused few casualties. Overall, the Israelis generally outmaneuvered the Egyptians, overcoming their defenses without much difficulty. The two Israeli penetrations turned inward, executing a double envelopment and then headed west toward al-'Arish.<sup>61</sup>

By this point it was about midday and word began to arrive at the various Egyptian

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<sup>57</sup> Bandman, p. 92; Dayan, pp. 116-120; Dupuy, pp. 165-168; Gawrych, *Key to the Sinai*, pp. 50-57.

<sup>58</sup> Dupuy, pp. 182-184; Gawrych, *Key to the Sinai*, p. 58; Herzog, *The Arab-Israeli Wars*, pp. 126-129.

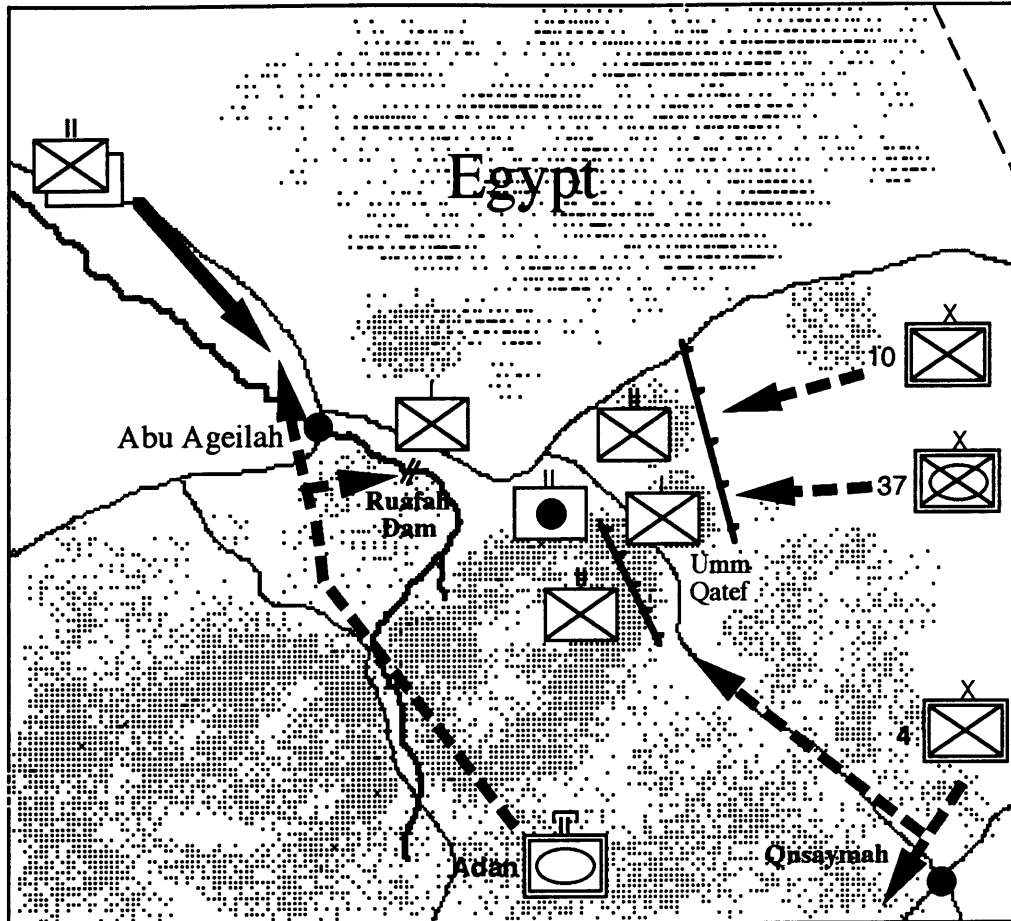
<sup>59</sup> Dupuy, pp. 178-182; Gawrych, *Key to the Sinai*, pp. 41, 61-62.

<sup>60</sup> Dupuy, pp. 180-182.

<sup>61</sup> Bandman, pp. 86-87; Dayan, pp. 133-143; Dupuy, pp. 184-188; Herzog, *The Arab-Israeli Wars*, pp. 129-133.



## The Battle of Abu Ageilah, October 1956



—→ - Egyptian reinforcements from al-Arish

←--- - Israeli attacks

□ - Egyptian units

□ - Israeli units



units in Sinai that they were to conduct a fighting withdrawal to the canal.<sup>62</sup> In some cases this was impossible, thus the encircled Egyptian forces at Abu Ageilah abandoned most of their heavy equipment, snuck out of their positions during the night of 1/2 November and set out across the desert toward B'ir Gifgafah before the Israelis realized what was happening. Elsewhere, Egyptian units executed a fairly effective fighting withdrawal, especially the 4th Armored Division and elements of the 3rd Infantry Division pulling out of the Rafah/al-'Arish area. Nevertheless, the Israelis pursued the Egyptians and caught up with them at several points, inflicting heavy casualties on them in meeting engagements while taking few of their own. In all of these clashes the Egyptians generally clung to the roads and mostly failed to put out adequate flank guards so they were constantly outmaneuvered by the Israelis. The Egyptians rarely tried to maneuver against the Israelis. Only occasionally did the Egyptians even try to counterattack when the Israelis caught them; instead they mostly just stopped and simply blasted away at their attackers or else tried to flee even faster. Moreover, the Israelis again proved to be superior marksmen and so did considerably more damage to the Egyptians than they suffered in return.<sup>63</sup>

Because of the rapid pace of the Israeli pursuit operation, much of the retreat turned into a rout. The Egyptian units simply could not retreat as quickly as the Israelis could chase and many Egyptian units were caught from behind or had their routes of advance blocked by faster Israeli forces. Other Egyptian troops, such as those previously defending Abu Ageilah, set out across the desert in hopes of finding their way back to the canal, but generally either died in the desert or were rounded up by the Israelis. Israel took 6,000 prisoners in all, the overwhelming majority of which surrendered during the withdrawal.<sup>64</sup> Many Egyptian units disintegrated during the course of the retreat and Cairo's senior leadership panicked when these bedraggled troops began to trickle into the capital in dribs and drabs rather than organized units.<sup>65</sup> Only one Egyptian battalion returned from Sinai intact and capable of engaging in combat operations.<sup>66</sup> In the Sinai, the fighting was all but over by 3 November, as the Israelis drove to the canal in central Sinai, rolled up the Palestinian defenses in the Gaza strip, and seized Sharm ash-Shaykh.<sup>67</sup>

### **The British and French Invasions**

The Egyptians had expected the British to land at Alexandria, march down to Cairo to overthrow the government and then move to secure the canal. This was, in fact, the original intent of the British and French commanders, however, the political leadership in London decided the British public would not accept such an operation if the ostensible reason for the invasion was the defense of the canal from combat between Egyptian and Israeli forces in Sinai. Consequently, the allied commanders, Stockwell and Beaufre, were forced to invade at Port Said and Port Fuad and then try to march south along the narrow causeway to seize the canal. For this, the British had assembled an infantry division, an airborne brigade, and a Royal Marine commando brigade while the French mustered an

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<sup>62</sup> Dupuy incorrectly reports that some Egyptian units in the Rafah area began retreating as early as 0200 or 0300. As Bandman points out, orders for the retreat did not reach the eastern front headquarters until noon on 1 November, at which point it was further disseminated to the field units. Consequently, the earliest Egyptian units could have begun acting on the orders of the General Staff is 1200. Bandman, p. 85.

<sup>63</sup> Dayan, pp. 133-143; Dupuy, pp. 188-194; Herzog, *The Arab-Israeli Wars*, pp. 128-129; Kyle, p. 414.

<sup>64</sup> Moshe Shemesh, "Egypt: From Military Defeat to Political Victory," in Tröen and Shemesh eds., p. 154.

<sup>65</sup> Especially enlightening on the perception of the Egyptian top leadership regarding the state of their army as it retreated out of Sinai are Moshe Shemesh ed., "'Abd al-Latif Bughdadi's Memoirs," and Moshe Shemesh ed., "Sayyid Mar'i's Political Papers," both in Tröen and Shemesh eds., pp. 345-350, 367. Bughdadi and Mar'i were old Free Officer colleagues of Nasser's and important cabinet members during the 1956 war.

<sup>66</sup> Gawrych, *Key to the Sinai*, p. 64.

<sup>67</sup> Dayan, p. 157; Dupuy, pp. 191-196; Herzog, *The Arab-Israeli Wars*, pp. 133-138.

airborne division, an independent parachute battalion and a light mechanized brigade. The British and French also had a huge naval force with three aircraft carriers and hundreds of modern jet fighters and bombers.<sup>68</sup> Against this, the Egyptians had two battalions of reservists at Port Said which they reinforced with two companies of regulars and another battalion of reservists. The only armor the Egyptians had in the area were four Su-100 self-propelled guns.<sup>69</sup> The one advantage the Egyptians had was the terrain: two cramped Middle Eastern towns stuck out at the end of a narrow causeway.

The Allied fleet moved painfully slowly and the initial airborne assault did not begin until the morning of 5 November after heavy carrier air strikes. The Egyptians fought extremely hard but were slowly reduced by the elite British and French paratroopers. By the end of the day much of western and southern Port Said were in British hands and the French had completed the capture of Port Fuad. Of greatest importance, the paratroopers had seized the southern exits to the city--the bridge at Raswah (which the Egyptians failed to destroy) and the road leading down the causeway. Once the bridge had fallen the Egyptians counterattacked repeatedly with armor and infantry, but their attacks, while determined, were nothing more than mad charges at the French positions, and the French beat back each assault with ease.<sup>70</sup>

The next morning the British began amphibious landings along the north shore of Port Said. The few remaining Egyptian defenders were driven off by a 45-minute preparatory bombardment and there was little opposition to the landings. Despite the ease with which the Egyptians could have blocked the British/French forces in Port Said, they failed to do so. Not only had they not blown the bridge at Raswah--the only bridge leading to the causeway--they had not deployed a force to block the causeway by 6 November (five days after the GHQ began redirecting reinforcements to Port Said in anticipation of the British/French landings). As a result, British armor was able to race down the causeway the night of 6/7 October getting as far as al-Kap before politics intruded. London buckled under diplomatic pressure--especially from the United States--and agreed to a cease-fire, halting the invasion in its tracks.<sup>71</sup>

### **The War in the Air**

The Egyptian Air Force turned in a poor performance all-around during the 1956 fighting. Although on paper the EAF had formidable strength, in reality it was plagued with problems. Of greatest importance, Cairo had few pilots capable of flying the modern jet fighters they had acquired from the Soviet Union. Despite the relative simplicity of these first generation aircraft, the Egyptians had had tremendous difficulty training personnel to fly them, thus for example, the EAF had only about thirty pilots qualified to fly its 120 MiG-15s.<sup>72</sup> To compensate for this shortage, Amer ordered the EAF to have multiple planes available for each pilot so that after he returned from one mission he could immediately jump into another fueled and armed plane and take off for another mission. Quite obviously, the strain on Egypt's pilots probably would have cut short this practice had the EAF participated in the conflict for longer than two days.<sup>73</sup> To some extent, the pilot shortage was excused by the limited number of operational aircraft the Egyptians could put into the air. Because of poor maintenance and repair practices, at the start of the war the Egyptians had only about 70-80 operational aircraft including 30-35 of 120 MiG-

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<sup>68</sup> Herzog, *The Arab-Israeli Wars*, p. 139.

<sup>69</sup> Dupuy, p. 204; Kyle, p. 445.

<sup>70</sup> Beaufre, pp. 90-113; Dupuy, pp. 205-207; Fullick and Powell, pp. 131-150; Herzog, *The Arab-Israeli Wars*, pp. 138-140; Kyle, pp. 383-384, 445-463; Love, pp. 601-622.

<sup>71</sup> Beaufre, pp. 90-113; Dupuy, pp. 205-207; Fullick and Powell, pp. 131-150; Herzog, *The Arab-Israeli Wars*, pp. 138-140; Kyle, pp. 383-384, 445-463; Love, pp. 601-622.

<sup>72</sup> Kyle, p. 369.

<sup>73</sup> Love, p. 510.

15s, 12 of 50 Il-28 bombers, and 27 of 78 Meteors and Vampires.<sup>74</sup> Given these numbers, it is not surprising that on 30 October they managed only 40 sorties of all types. On 31 October Amer's decree boosted the number of sorties to about 90.<sup>75</sup> The next day, British and French airstrikes destroyed most of Egypt's operational planes and those still flyable withdrew to southern Egypt.

The planes Egypt got airborne and into combat on 30 and 31 October had little impact. On 30 October, Cairo sent 6 Illyushins to bomb IAF airbases, but only one actually even found its way to Israel and this plane could not find its target so it dropped its bombs on a deserted hill south of Jerusalem.<sup>76</sup> The Egyptians flew a number of airstrikes against the Israeli paratroopers at the Mitla pass, against Sharon's column moving through central Sinai, and against the Israeli forces moving southward to Sharm ash-Shaykh, but did very little damage. Only once did Egyptian fighters cause any real harm to the Israelis--at the height of Sharon's battle inside the Mitla pass where Egyptian air attacks on the Israeli units pinned down on the valley floor caused thirty casualties and knocked out three vehicles.<sup>77</sup>

In air-to-air combat the Egyptians did no better. Egyptian fighters mostly avoided dogfights with the Israelis and did not contest the British and French airstrikes at all. Generally, the Egyptians tried to ambush single Israeli aircraft or pairs returning from strike missions low on fuel. The Egyptians only willingly engaged when they had an advantage of at least 2:1 and preferably 4:1. Nevertheless, Egyptian fighters did not succeed in shooting down a single IAF plane.<sup>78</sup> The Israelis aggressively pursued Egyptian aircraft and shot down eight fighters in dogfights (four MiG-15s, four Vampires).<sup>79</sup> In the largest air battle of the war, on 30 October over Kabrit airfield, 16 Egyptian MiGs took on 8 Israeli Mysteres, but the Israelis prevailed by breaking up the Egyptian formations, disrupting their methodical tactics, and forcing them to improvise. The Egyptians showed little flair for air combat maneuvering and tried to escape as quickly as they could. Although the Mysteres were terribly low on fuel they shot down two MiGs before the Egyptians were able to break off the engagement.<sup>80</sup>

### **General Observations on Egyptian Military Effectiveness in the Sinai-Suez War**

A fairly mediocre Israeli performance and Cairo's decision to retreat from Sinai only two days into the war make it somewhat difficult to clearly assess Egyptian military effectiveness in this war.<sup>81</sup> The initial clashes allowed Egyptian forces to remain on the defensive behind their impressive fortification systems, and they began to retreat just when their defensive system began to come unglued. Nevertheless, it is clear that at the tactical level, Egyptian performance was inconsistent at best.

#### *Tactical Performance*

The Egyptians showed tremendous tenacity and considerable bravery in defending their fortified positions despite the fact that Tel Aviv so completely duped Egyptian intelligence that the Israelis enjoyed strategic surprise at the outset of the campaign. At

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<sup>74</sup> Dupuy, p. 176; Love, p. 492; J. A. Sellers, "Military Lessons: The British Perspective," in Tröen and Shemesh eds., p. 21.

<sup>75</sup> Dayan, p. 109; Dupuy, p. 176; Love, p. 528.

<sup>76</sup> Love, p. 512.

<sup>77</sup> Dayan, p. 109.

<sup>78</sup> Cohen, p. 122; Dayan, p. 109.

<sup>79</sup> Dayan, p. 109; Kyle, p. 369; Yonay, pp. 160-170; Zeevy, p. 67.

<sup>80</sup> Yonay, pp. 120-121.

<sup>81</sup> On various problems that afflicted the Israeli military during the 1956 war, see Gawrych, *Key to the Sinai*, esp. pp. 26-30.

Umm Qatef-Abu Ageilah, at the Mitla Pass, in Port Said and at a number of other places, Egyptian defenders gave the Israelis all they could handle. In each of these battles, Egyptian units maintained very tight unit cohesion and continued to fight long after their positions had become untenable. At least at Abu Ageilah and at the Raswah bridge, Egyptian units counterattacked repeatedly despite taking heavy casualties and making little progress. However, there were also a number of occasions when Egyptian units broke and ran under very slight pressure. At al-Kuntillah, Qusaymah, an-Nakhl, ath-Thamadah, and the Giradi pass, Egyptian units fled or surrendered in good defensive positions after only a brief battle with the Israelis.<sup>82</sup> Similarly, the Palestinian 8th Infantry Division in the Gaza-Khan Yunis area fought fiercely to defend some locations but disintegrated under Israeli probes in others. At least part of the problems with unit cohesion can be tied to poor officer-enlisted relations because in many cases, Egyptian officers fled at the first sign of trouble. Frequently, this resulted in their troops surrendering or running when they came under fire from the Israelis, however, there is no evidence that would give a more specific measure of the frequency of officer desertions or their correlation with unit collapses.<sup>83</sup>

Unit cohesion, static defense, and personal bravery were the main, and perhaps only, bright spots in Egyptian tactical military performance. Fortunately for the Egyptians, during the first few days of the fighting, this was almost all that was required of their army in Sinai. Hamfisted Israeli efforts to take Um Qatef-Abu Ageilah and the Mitla pass by frontal assaults played into the Egyptians' hands because all that was required to defeat them was good unit cohesion, strong static defense, and the bravery and endurance of the Egyptian soldier. The Egyptian retreat began just when the Israelis, particularly the 7th Armored Brigade, had broken through the first line of Egyptian defenses and were just beginning to tear into the operational depth of the Egyptian defensive system. Nevertheless, very significant flaws manifested themselves even during the initial, static phase of the fighting.

The slowness of Egyptian forces was probably the most obvious problem, at least to the Israelis. Every operation initiated by the Egyptians took inordinately long to accomplish. When attacked head on, the Egyptians fought back immediately, but their counterattacks generally were slow to develop and often were not launched until after the crucial moment in the battle. Indeed, Adan's rebuff at the Ruafah dam, is an exception that proves the rule as on this occasion the Egyptian counterattack was not only determined but perfectly timed, with the result that the small Israeli force could not take the position. The Egyptians frequently did not shift reserves in time to bolster crumbling sectors, and the movement of reserves and reinforcements mostly took too long to contribute to the battle. For example, the 4th Armored Division began moving the night of 29 October and was across the canal before dawn on 30 October, however, it had not mustered at B'ir Gifgafah until 1 November. Even taking into account the persistent Israeli air attacks, it is absurd that an Egyptian mechanized formation would need two full days to administrative march less than 90 kilometers. By contrast, Sharon's column moved over 150 kilometers from al-Kuntillah to the Mitla pass in one day--also against air interdiction, and in an advance-to-contact mode--and the Egyptian 2nd Infantry Brigade, which was ordered to begin moving at approximately the same time as the 4th Armored Division, was in place at the Mitla Pass (only about 20 kilometers closer than B'ir Gifgafah) at least 36 hours before 4th Armored Division made it to B'ir Gifgafah. The quickness of Israeli actions coupled with the sluggishness of Egyptian operations combined to give the Israelis a significant advantage in engagements such as the breakthrough at Rafah, and in the ability of 7th Armored Brigade to push into central Sinai against little resistance.

While the Egyptians did quite well in static defensive operations, they performed poorly in more fluid engagements. Egyptian junior officers showed little ability to innovate

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<sup>82</sup> Dayan, pp. 81-88, 143.

<sup>83</sup> Be'eri, p. 323; Love, p. 495.

or improvise responses once the course of battle obviated their original orders. Time and again, Egyptian units forced to diverge from their prepared plan of action either did nothing or continued to execute their previous mission even if changed circumstances made this dangerous or counterproductive. Israeli, French and British officers consistently remarked that the Egyptians fought very hard but showed little imagination and so were fairly easily overcome by flanking operations or other unexpected moves. Egyptian local commanders consistently waited for directions from the highest levels before undertaking any actions, a pattern that was a primary culprit in their slow pace of operations. Perhaps the best example of this was the force sent from al-'Arish to reinforce Abu Ageilah that was outmaneuvered and defeated by Adan's handful of troops and then never again attempted to attack eastward to relieve the forces trapped around Abu Ageilah--even while Adan was busy trying to break through the Ruafah dam position to hit the Um Qatef positions from the rear. For this reason, local counterattacks were actually quite rare, because the initiative to conduct a counterattack invariably had to come from very high levels, often the General Staff. Moreover, as General Dayan has observed, because the Egyptian General Staff could provide only the most general guidance to its field forces in ordering counterattacks--and the specifics had to be decided by tactical commanders on the spot--these operations invariably came as slow frontal assaults conducted with vigor, but little skill.<sup>84</sup> On top of all this, Cairo insisted on keeping a tight rein on its field commanders and approving all significant command decisions, further limiting the flexibility and speed of Egyptian tactical operations. The problems of overcentralization and limited tactical initiative were reinforcing: Egyptian GHQ micromanaged many of the battles, but by the same token, Egyptian field commanders went out of their way to refer all decisions back to the General Staff.

Egypt failed to take advantage of its considerable superiority in numbers and quality of weapons over Israel. Egyptian tanks and self-propelled guns, in particular, were never used like tanks. Instead they served primarily as mobile pill-boxes moving to a defensive position and remaining there regardless of the course of battle. On the few occasions that Egypt threw its armor into counterattacks the tanks charged straight ahead, relying solely on their firepower to knock out the enemy. It was tactics such as these that allowed the Israelis in Shermans and AMX-13s to defeat Egyptian T-34/85s, Su-100s and Archers in virtually every armored engagement of the war. Egyptian maintenance practices also were extremely poor. In addition, to the figures for the air force cited above, less than half of Egypt's new Soviet tanks were operational at the start of the war.<sup>85</sup> Moreover, the Israelis noted that in all of Sinai there was not a single Egyptian maintenance workshop.<sup>86</sup>

The Egyptians were further hampered by inadequate attention to combined arms coordination. For example, at Raswah the Egyptian infantry failed to support their armor, allowing French paratroopers to easily beat back the Egyptian tanks with anti-tank weapons and then turn on the Egyptian infantry with crew-served weapons.<sup>87</sup> Similarly, in the fighting against Adan's force, the Egyptian's never adequately coordinated infantry, armor, and artillery, with the result that the Israelis were able to defeat each element separately.<sup>88</sup>

Another very damaging problem the Egyptians experienced throughout their command structure was a constant distortion and obfuscation of information. Successes were blown out of all proportion, while bad news generally wasn't passed up the chain of command at all--or if it was, the enemy force was greatly exaggerated to make defeat seem more palatable. Dayan noted that the Egyptians routinely reported, "the presence of Israelis

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<sup>84</sup> See Dayan, esp. pp. 35, 106-107, and 124.

<sup>85</sup> Love, p. 492.

<sup>86</sup> Safran, *From War to War*, p. 353.

<sup>87</sup> Beaufre, pp. 90-113; Dupuy, pp. 205-207; Fullick and Powell, pp. 131-150; Herzog, *The Arab-Israeli Wars*, pp. 138-140; Kyle, pp. 383-384, 445-463; Love, pp. 601-622.

<sup>88</sup> Bandman, p. 92; Dayan, pp. 116-120; Dupuy, pp. 165-168.

battalions and brigades even when they are faced only by sections and platoons."<sup>89</sup> Even catastrophic failures were sometimes reported as great victories, and as these deceptions proliferated over the course of the fighting the higher command authorities had a less and less accurate picture of what was happening in Sinai. For example, based on the early reports of the Egyptian forces who had fled from Sharon's brigade on 29 October the General Staff concluded that the Israelis were conducting a massive invasion of Sinai, ultimately the right call, but one based on heavily distorted information.<sup>90</sup> Likewise, the Egyptian 1st Armored Brigade (of the 4th Armored Division) tried to excuse its slow progress on 31 October by claiming it was locked in battle with Israeli armor--upon which it was inflicting heavy casualties--although it never actually engaged the Israelis until the next day when it began retreating and the Israeli 7th Armored Brigade mauled its rearguards.<sup>91</sup> Egyptian ground and air forces claimed that so many Israeli aircraft were attacking them that Cairo concluded French and British aircraft were participating in these attacks because the tiny Israeli Air Force clearly could not have been generating so many sorties.<sup>92</sup> Meanwhile all six of the Egyptian Illyushin pilots reported having caused serious damage to their targets, although only one even found Israel and it could not find its target.<sup>93</sup>

### *Strategic Performance*

It is at the strategic/operational level that Egypt's performance in the Sinai-Suez war is most difficult to assess. Very little information is available regarding decision-making at the level of the General Staff and Cairo's senior field commanders, however, a number of points can be made. First, it is clear that most of Egypt's top military leadership, particularly General Amer, did not react well to news of the initial Israeli attack. Having been assured by their intelligence services that Israel would not attack, they were completely surprised by the invasion and may have panicked to some extent. Amer in particular has been criticized by other Egyptian leaders for losing his cool, interfering excessively in tactical decisions and issuing inappropriate commands. Little information is available regarding his specific actions. However, the limited information that is available suggests that even if the Egyptian high command did panic, it did not have an undue effect on Egyptian combat units or Egyptian strategic decision-making.<sup>94</sup> It is hard to find problems among Egyptian tactical formations that can be reasonably blamed on panic among the senior ranks: most Egyptian units fought very hard in static positions, they generally did not crack under even very intense Israeli pressure, and what eventually compromised their defensive scheme was their inability to match the Israelis in rapid maneuver warfare. Indeed, the Egyptian defenses in Sinai had only just begun to crack when Cairo ordered a retreat, and even during the retreat many Egyptian units kept good order and tried to conduct a fighting withdrawal rather than simply rushing madly for the canal as they would in 1967.

With regard to strategic decisions, the few we know were made by the General Staff appear on closer inspection to have been intelligent moves. Egyptian decision-making during the war looks especially competent when one takes into account the thick shroud of illusions and misimpressions spun by the Egyptian field units in Sinai. The initial Egyptian decision to concentrate its forces in the Delta rather than in Sinai was entirely appropriate given that 1) Egyptian intelligence assured Cairo that Israel would not launch a major

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<sup>89</sup> Dayan, p. 63.

<sup>90</sup> Bandman, p. 86.

<sup>91</sup> Shabtai Teveth, *The Tanks of Tammuz*, (NY: Viking, 1968), p. 47.

<sup>92</sup> Shemesh, p. 339.

<sup>93</sup> Love, p. 512.

<sup>94</sup> See Shemesh, "al-Bughdadi's Memoirs," pp. 337-350; and Shemesh, "Mar'i's Political Papers," esp. pp. 367-370.

attack, and 2) a British landing in the Nile delta and a march on Cairo and the canal was a far more dangerous threat than losing Sinai to Israel. Later, when Cairo became aware of the Israeli move against the Mitla pass with no sign of British action--and because it was led to believe that Sharon's column was a much larger force than was actually the case--it ordered an infantry brigade to the Mitla and ordered its elite armored division to B'ir Gifgafah to counterattack the main Israeli thrust. Meanwhile it kept its other three infantry divisions in place along the canal and in the delta to guard against the possibility of a British invasion. Regardless of how panicked Amer and the General Staff may have been, these were perfectly reasonable moves. In fact, if 4th Armored Division had gotten out to B'ir Gifgafah quicker and been able to counterattack into Sharon's right flank, they might have done serious damage to the Israeli offensive. Indeed, this was one of Dayan's major concerns on 31 October and one reason 7th Armored Brigade was ordered to press on into central Sinai: it was to engage the Egyptian armor before they could turn on Sharon.<sup>95</sup>

The next important move by the Egyptian GHQ was the decision to withdraw from Sinai during the night of 31 October/1 November to concentrate against the British and French invasion. Here again, it is hard to find fault with the Egyptian decision. The British threat was definitely the more dangerous of the two because the Egyptians had concluded (correctly) that the Eden government wanted to overthrow Nasser and reassert British control of the canal whereas there was little reason to believe that Israel would do more than occupy Sinai. Thus the 4th Armored Division, as the most capable unit in the Egyptian army and its only real mechanized reserve, had to be withdrawn from Sinai to deal with the British threat. Without the 4th Armored Division, it is extremely doubtful the Egyptian forces in Sinai could have held back the Israelis (Indeed, given the poor performance of even 4th Armored Division units in combat, it is unlikely the Egyptians could have held Sinai even with the 4th Armored Division there), who were already in the process of encircling the major Egyptian troop concentrations at Abu Ageilah, Rafah, and the Gaza strip. Consequently, *not* to have ordered a withdrawal from eastern Sinai when the decision was made to shift 4th Armored Division to face the British and French would have been foolish.<sup>96</sup>

The one area in which the reported panic in the Egyptian high command seems to have influenced Cairo's strategic decision-making seems to have been the decision to fall back to the canal itself. Specifically, Nasser and his generals do not seem to have considered any alternatives to a general retreat to Suez, thereby relinquishing all of Sinai. For example, the successful defense of the Mitla pass suggests that the Egyptians could have fallen back to the passes in western Sinai and reformed their defensive line there. This might have been Cairo's best move: the forward positions in eastern Sinai were clearly compromised by the flanking move of the Israeli 7th Armored Brigade, but the passes were still in Egyptian hands and could be easily defended. Yet the decision to retreat does not appear to have ever been seriously examined in Cairo, probably because the sudden British and French air strikes coming on top of the surprise Israeli invasion had so unnerved Nasser and the General Staff that they simply wanted to pull as much combat power back to defend the canal and the delta as they could and did not think through alternative retreat scenarios.

Overall, the performance of Egypt's generals was not brilliant but it was certainly adequate. Given the quantitative and qualitative imbalances between Egyptian forces on the

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<sup>95</sup> Dayan, p. 108; Dupuy, pp. 177-178; Gawrych, *The Key to Sinai*, p. 41.

<sup>96</sup> It is also worth noting that, according to Gawrych, Amer opposed the decision to withdraw from Sinai and Nasser had to overrule him. This does not strike me as the actions of a panicked or incompetent general. Rather, it suggests that while he may have been surprised by the initial Israeli invasion, Amer concluded (probably correctly) that Egyptian troops were mostly holding in Sinai and that a major counterattack by 4th Armored Division would stop the Israelis altogether. If, as Gawrych implies, this was the case, then it would appear that Amer got over any initial panic fairly quickly and his confidence in his troops and commanders had resurfaced by the crucial phase of the war.

one hand and Israeli, British, and French forces on the other, the actions of Egypt's senior commanders were reasonable. Overall, it is difficult to blame them for Egypt's defeat. After having been misled by their intelligence service into believing Israel would not attack, they concentrated against the British. When the Israelis attacked in force but the British and French didn't, they quickly shifted reserves to meet the Israelis. When the British and French did attack days later, they pulled those same forces back to meet what was clearly the greater threat. Because its forces in Sinai were going to be cut off without the aid of their reserves, Cairo ordered a retreat. In each of these cases, not to have done what the Egyptian GHQ actually did would have been the more foolish decision. Even the decision to retreat from Sinai altogether was a much better decision than not ordering any withdrawal, even though there may have been better ways to retreat than the one actually selected.

With regard to each of the strategic decisions made by the Egyptian GHQ, one could easily attach the postscript, "And if only Egyptian tactical formations could have executed this operation better the war might have turned out very differently." The orders of the Egyptian General Staff were adequate at worst, and Egypt's greatest problem was the inability of its battalions, brigades and divisions to carry out their missions more effectively. The critical variables in Egypt's defeat in 1956 then were, first, the overwhelming advantage of the attackers--and their ability to attack Egypt on two fronts--and second, the poor performance of Egyptian tactical forces. While Egypt's companies, battalions and brigades did quite well when conducting static defensive operations from their fortified positions, their inability to conduct effective maneuver warfare against the Israelis doomed them. Eventually, the Israelis found ways into their operational depth, at which point the Egyptian units were effectively dead because their own reserves simply could not keep pace with the flexible, rapidly maneuvering Israeli units. This allowed the Israelis to break through the forward Egyptian defenses, to catch and maul retreating Egyptian units, and to conquer Sinai. Similarly, critical Egyptian failings allowed the British and French to capture Port Said and Port Fuad and secure the entrance to the causeway, and only diplomatic pressure prevented the fall of the entire canal zone to the British and French.

### **The Yemeni Civil War, 1962-1967**

Egyptian forces showed little improvement during their intervention in North Yemen in the 1960s. Initially, Egyptian forces were able to secure control of the country and defeat the first forays of the Royalist insurgents because of their superior numbers, modern weaponry and organization, and as the complete helplessness of the rebel forces. As time went on and the Royalists began to learn some of the skills of guerrilla warfare, Egyptian weaknesses became increasingly apparent. In particular, the mountainous terrain and nature of counter-insurgency operations allowed the Royalists to exploit the inability of Egyptian tactical forces to maneuver independently, to coordinate their actions on the fly, and to improvise and act aggressively. Commissariat politicization grew throughout this period, although both palace-guardism and praetorianism continued to abate. Soviet weaponry continued to pour into Egypt, and Soviet methods increasingly seeped into Egyptian doctrine although even by 1967 it was far from total.

### **Egypt and the Egyptian Military, 1956-1962**

The experience of 1956 had little impact on the Egyptian military. Cairo rationalized away its defeat by blaming it on the participation of Britain and France--two European great powers who it could not possibly have been expected to defeat. Moreover, the Egyptians tended to believe that the British and French decision to suspend operations was as much a result of their stiff resistance as US diplomatic intervention. As for the



fighting against the Israelis, the Egyptians focused on their strong performances at the Mitla pass and Umm Qatef, and convinced themselves that their eviction from Sinai was simply the result of their conscious decision to retreat back to the canal to fight the British and French.<sup>97</sup> Indeed, interviews conducted among Egyptian officers captured by Israel in the Six-Day war revealed that the Egyptian officers almost to a man believed that, "if not for western intervention, the Egyptian army would have reached Tel Aviv," and one officer even insisted that Gaza had been captured by British forces, not Israelis.<sup>98</sup>

The major influence on Egyptian military developments after the Suez-Sinai war instead was Nasser's foreign policy. Nasser's foreign policy became increasingly ambitious and he increasingly reshaped the Egyptian military to serve as a more useful tool in helping him achieve these ambitions. First, Egypt had not yet had its revenge on Israel for the "disaster" of 1948. Second, while the first round had gone to Cairo, it was far from clear to the Egyptian leadership that Britain and France had foregone their claims to the canal or their desires to oust the Egyptian regime. Finally, Egypt's defiance of Britain and France--the old colonial powers--thrust Nasser into the spotlight as a hero of the Third World. This attention prompted Nasser to begin to consider using the Egyptian military to aid the forces of "socialism" and "pan-Arabism" throughout the Middle East against the forces of "reaction." Thus in the latter half of the 1950s palace-guardism declined further as Cairo increasingly focused its military attention on external security missions, entrusting the internal security function more and more to the forces of the Interior Ministry and the various intelligence services.<sup>99</sup>

To aid this drive to increase the conventional capabilities of the Egyptian armed forces, Cairo drew closer to the Soviets. Egypt procured large amounts of additional Soviet equipment, more Soviet advisers were brought in, and Egyptian officers began attending training courses in the USSR. In addition, the Soviets were asked to take a greater role in training and reforming Egyptian forces. Many old British practices were abandoned and the Egyptian ground forces were reorganized along Soviet lines.<sup>100</sup> Egyptian tactics were refashioned in accord with Soviet practices.<sup>101</sup> The Soviets sold Egypt more advanced weaponry as well, including large numbers of T-55 tanks and MiG-17 and -19 fighters. Nevertheless, the Soviets remained frustrated at the long periods of time required to teach the Egyptians to operate and maintain this equipment.<sup>102</sup>

### Civil War in North Yemen

In September 1962, several factions of officers in the Yemeni Army, eventually led by the Chief of Staff of the Yemeni Armed Forces, Brigadier General 'Abdallah as-Sallal, overthrew the monarchy of Imam Muhammad al-Badr and proclaimed the Yemen Arab Republic. Many of the coup-makers were strong supporters of Nasser and pan-Arabism and received aid and pledges of support from the Egyptian government before launching the coup. For Nasser, the coup in the Yemen was the perfect opportunity to demonstrate his commitment to the rhetoric of pan-Arabism and to use his new military power in the interests of his broad international ambitions. Consequently, within days after the overthrow of Imam Muhammad, five thousand Egyptian troops spearheaded by an elite paratrooper brigade, landed in Sanaa to cement the new "Republican" military

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<sup>97</sup> Cordesman, *The Arab-Israeli Military Balance*, p. 22; Dupuy, p. 235.

<sup>98</sup> Shemesh, "Egypt: From Military Defeat to Political Victory," p. 155.

<sup>99</sup> Safran, *From War to War*, pp. 211-213; Vatikiotis, pp. 405-407.

<sup>100</sup> J. C. Hurewitz, *Middle East Politics: The Military Dimension*, (NY: Praeger, 1969), p. 102; Safran, *From War to War*, p. 214.

<sup>101</sup> Edward N. Luttwak and Daniel Horowitz, *The Israeli Army, 1948-1973*, (Cambridge, MA: ABT Books, 1983), p. 171.

<sup>102</sup> Luttwak and Horowitz, p. 171.

government's hold on power.<sup>103</sup>

An insurgency quickly coalesced around the Imam Muhammad and members of the royal family who rejected Sallal's government. Moreover, Saudi Arabia--which feared and loathed Nasser and his socialist pretensions--came to the aid of the Royalists, providing them with money, arms, sanctuary, and provisions. In response, Egypt deployed additional forces to crush the insurgency.

### **Course of Operations**

It is unclear exactly what the Egyptians were trying to do in the beginning. It seems that Cairo did not expect to face a full-blown insurgency (weak, disorganized, and inept though the Royalists were). In the first few months after their intervention, the Egyptians generally concentrated on securing Republican control over Sanaa and a few other major population centers, and blundered around the countryside when they received specific reports of oppositionist activity. By the start of 1963, however, the Egyptians appear to have recognized that they would need to conduct a systematic counter-insurgency (COIN) campaign to crush the Royalists and began to organize themselves for such an effort. This is not to suggest that the Egyptians had the slightest idea how to conduct a COIN operation, only that they began to consciously plan their military moves and to tie them together toward the general goal of defeating the Royalist insurgency. In preparation for this effort, Egyptian troop strength in Yemen climbed to about 30,000 men.<sup>104</sup>

### *Egypt Ascendant*

In February 1963 the Egyptians launched their "Ramadan" offensive, an effort to crush the insurgency before it could really establish itself. The operation was personally planned and led by now-Field Marshal Amer himself. Amer's idea was to try to envelop the insurgent forces in the Jawf region of northeast Yemen, where they were most active. It was to be a giant pincer movement that would cut the Royalists from their supply lines to Saudi Arabia, and hopefully force them to stand and fight to prevent this. Amer mustered about 20,000 Egyptian and Republican troops as well as tribal levies for the offensive. In many ways, the Ramadan offensive was highly successful: the Royalists scattered before the firepower of the Egyptian forces, who drove deep into northeastern Yemen and captured virtually every population center of any size. At the strategic level, the plan showed a good understanding of maneuver. In one particularly noteworthy operation, an Egyptian thrust eastward from Sanaa took the city of Ma'rib--a major staging area for supplies from Saudi Arabia--by circling around to the eastern side of the city and outflanking the Royalist defenses.<sup>105</sup>

Although Amer's Ramadan offensive was a well-conceived conventional military operation, and in the words of Dana Adams Schmidt, a leading authority on the Yemeni Civil War, "probably the Egyptians' most brilliant operation," its real significance is debatable.<sup>106</sup> First, the Ramadan offensive was a conventional military campaign, not a true COIN operation, and as the Americans would learn in Vietnam and the Soviets in Afghanistan, successful conventional campaigns count for little against insurgencies. The achievements of the offensive can mainly be attributed to the amateurism of the Royalist forces who had no sense of how to run an insurgency. By employing armor, artillery and airpower to generate tremendous firepower, the Egyptians succeeded in scattering the

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<sup>103</sup> Vatikiotis, p. 406.

<sup>104</sup> Be'eri, p. 227.

<sup>105</sup> Edgar O'Ballance, *The War in the Yemen*, (Hamden, CT: Archon Books, 1971), p. 98; Ali Abdel Rahman Rahmy, *The Egyptian Policy in the Arab World: Intervention in Yemen, 1962-1967, A Case Study*, (Washington, DC: University Press of America, 1982), pp. 148-149; Dana Adams Schmidt, *Yemen: The Unknown War*, (London: The Bodley Head, 1968), pp. 164-165.

<sup>106</sup> Schmidt, p. 164.

Royalist bands who mostly had not figured out guerrilla hit-and-run/ambush tactics. The Egyptians were able to overrun several major Royalist supply bases because the Royalists had not learned to locate these in inaccessible locations and then guard their secrecy. The offensive did secure control of many important towns and road junctions in northeastern Yemen but could not win popular support for the Republican cause. Moreover, Egyptian forces moved exceedingly slowly and tactical commanders showed little willingness to exploit sudden opportunities or aggressively pursue defeated insurgent bands with the result that most of the damage inflicted was ephemeral. By March, the offensive had largely ground to a halt without taking the critical Royalist supply route to the Saudi base at Najran and, more important still, the Egyptians failed to kill many Royalists, as most fled from the Egyptian armor deeper into the mountains. Consequently, while the Ramadan offensive succeeded in crippling the insurgency in the northeast for over a year, it did only superficial damage to the insurgent campaign overall. In January of the next year, the Royalists conducted a fair-sized campaign of sabotage and hit-and-run attacks in western Yemen, indicating their recovery from the Ramadan offensive.<sup>107</sup>

### *The Tide Turns*

In the summer of 1964, responding to the Royalist activity in northwest Yemen during the winter, the Egyptians mounted a new offensive there in hope of repeating their success the year before in the east. It is unclear why, but Amer had relinquished personal control of the operations in Yemen to Lt. General 'Abd al-Majid Kamal Murtagi. Murtagi's Haradh offensive attempted to duplicate many of the aspects of Amer's Ramadan offensive. In some ways it was even more impressive than Amer's offensive. However, it too was essentially a conventional military campaign, and so was doomed to cause only superficial damage at best. Moreover, by 1964 training provided by foreign (mostly European) mercenaries had given the Royalists a better sense of guerrilla warfare, and arms provided by the Saudis had given them a bit more punch.<sup>108</sup> Although Egypt had bolstered its expeditionary force to 40,000 men, the Royalist cause had also been growing.<sup>109</sup>

Much of this growth can be attributed to the actions of the Egyptian Air Force in Yemen. While the EAF was not terribly attentive in flying missions in support of Egyptian ground forces--and those it did fly were useless--it waged a sustained terror-bombing campaign against Yemeni villages to prevent them from being used by the Royalists and to discourage their men from joining the insurgency. The bombing had exactly the opposite effect, and throughout the war it convinced more and more otherwise apathetic Yemeni tribes to throw in their lot with the Imam if only to get the Egyptians out of the country.<sup>110</sup>

The Haradh offensive began on 12 June 1964 with two thrusts from Sanaa by Egyptian troops and armor supported by Republican and tribal units. One column headed westward toward Beit Adaqah to cut the main north-south road in northwestern Yemen. The other column headed northwest to as-Sudah. Murtagi's intention was to use these forces to drive the Royalist forces operating northwest of Sanaa farther to the northwest, toward their bases and their supply routes from Saudi Arabia. Then on 15 August he unleashed his main attack, consisting of two thrusts: one from Haradh in extreme northwest Yemen that moved southeastward, and the other southward from Sadah, north of Sanaa. Thus Murtagi's scheme was to chase the insurgents north and northwest with the two attacks from Sanaa, and then to suddenly hit them from the opposite direction by coming south and southeast from Sadah and Haradh. Murtagi hoped that this offensive not only would destroy the insurgency in the northwest, but would also result in the capture of

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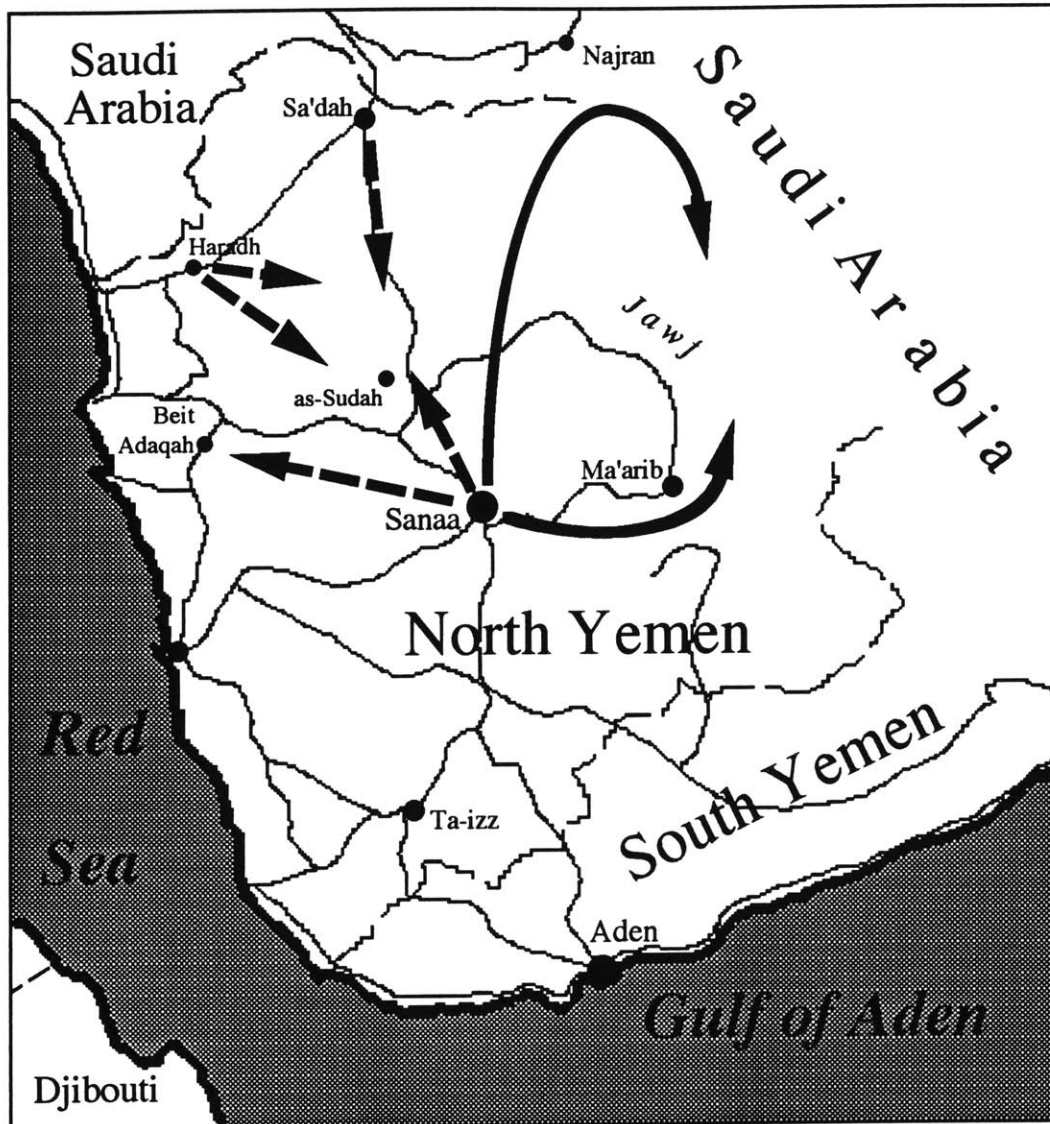
<sup>107</sup> O'Ballance, *The War in the Yemen*, p. 98; Rahmy, pp. 148-149; Schmidt, pp. 164-165.



<sup>108</sup> Schmidt, p. 171.

<sup>109</sup> Barnett, fn. 91, p. 309.

<sup>110</sup> Rahmy, p. 159.

## Major Egyptian Operations in Yemen, 1962-1967



-  - Ramadan Offensive, February 1963
-  Haradh Offensive, Summer 1964

the Imam himself whose headquarters were known to be in this area.<sup>111</sup>

The preliminary offensives from Sanah made good progress. The Imam escaped to Saudi Arabia, but the Egyptians overran the headquarters of Prince 'Abdallah Husayn--one of the Royalists' more effective military commanders--temporarily depriving the insurgents of centralized direction in this part of the country. In addition, they took a number of important towns and road junctions through which the insurgents had been moving troops and supplies. However, the (main) second-phase thrusts in August turned into a disaster. The Egyptian columns failed to conduct adequate reconnaissance or to deploy flank guards. They picked awful spots to make camp and establish fire bases, usually in valleys surrounded by dominating heights which they invariably failed to picket. In addition, by the time they got going in mid-August, rain had turned the floors of the wadis to mud but the Egyptian units insisted on trying to drive tanks and other vehicles along them anyway. As a result, at several different points, the Egyptian armor got stuck in the mud of the wadis only to be ambushed by Royalist guerrillas. Despite possessing numerical superiority and huge advantages in firepower, the Egyptians were battered on every occasion. They made no attempts to loop around and clear the ambushes from above or from the side, nor did the Egyptians even think to rush the Royalist positions on the wadi banks, as Egyptian tanks and APCs mostly fired wildly in all directions while the infantry scattered. On a couple of occasions the Egyptians were able to call in air support but their strikes were so inaccurate that they had little impact on the Royalist forces. Overall, the Egyptian main attacks moved slowly, suffered badly, and produced little tangible gains. Very quickly, these thrusts ground to a halt having inflicted little damage on the Royalists while suffering severe casualties of their own.<sup>112</sup>

Murtagi was extremely frustrated by the failure of the Haradh offensive and in late December 1964 he tried another, similar offensive in the northwest. Once again his major objective was to drive the insurgents out of the region, but an important secondary goal was again to capture the Imam, who had returned to this area. Murtagi disposed of about 7,000 Egyptian troops with another 3,000 Republican soldiers in four separate thrusts designed once again to trap the Royalists in a series of staggered and geographically opposed thrusts. However, the Royalists were getting better and better at guerrilla warfare, while the Egyptians were not getting any better at COIN operations. Once again Egyptian forces failed to deploy adequate patrols or flank guards, made camp in vulnerable locations and in battle relied exclusively on their firepower to try to obliterate the guerrillas. This tactical pattern regularly favored the insurgents. By February the Egyptians had suffered over 1,000 casualties in ambushes, and the offensive had ground to a halt.<sup>113</sup> Much to the surprise of the Egyptians and the Republican government, the Royalists followed up their success with a counterattack in the north that retook many positions lost in the previous months as well as other positions lost during the Haradh offensive. The Royalists even succeeded in temporarily closing the road from Sanaa to the main port of Hodeidah.<sup>114</sup>

Although the Royalists' winter 1964/65 offensive was a relatively minor operation in the grand scheme of the war, it marked a turning point in the course of the conflict. The European mercenaries training the Royalists were beginning to have a considerable impact on their skills as insurgents. The Royalists were never particularly good guerrillas. They were undisciplined and few of their commanders showed much flair for tactics. However, they were brave, hardy, good marksmen, cunning and bloodthirsty--all traits which the Europeans were able to harness and turn into useful insurgent skills. In addition, the Europeans began training a picked force of "semi-regular" Royalist guerrillas who were to

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<sup>111</sup> O'Ballance, *The War in the Yemen*, p. 128; Rahmy, p. 152; Schmidt, pp. 178-182.

<sup>112</sup> Schmidt, pp. 180-182; David Smiley with Peter Kemp, *Arabian Assignment*, (London: Leo Cooper, 1975), esp. pp. 163, 180, 211.

<sup>113</sup> Schmidt, p. 214.

<sup>114</sup> Rahmy, p. 152; Schmidt, p. 164.

serve as a cadre around which the Royalists could build a more formidable army, and that could be used for particularly important operations.<sup>115</sup>

Moreover, Egyptian and Republican forces were so tactically inept that even a modest improvement in Royalist skills dramatically shifted the balance in tactical engagements in their favor. Egypt proved incapable of bringing to bear its enormous advantages in fire power over the Royalists. Egyptian airstrikes and artillery bombardments were painfully slow to develop and highly inaccurate. David Smiley, an observer during the war, recounts one story in which an entire Egyptian battery of 105 mm. pack howitzers tried for hours but could not silence a lone Royalist 75 mm gun that sat immobile on a rock outcropping and fired without stop all day long.<sup>116</sup> Time and again, Europeans observing (or participating in) the war remarked that the Egyptians insisted on doing things "by the book," and seemed utterly incapable of acting effectively when things did not go as they had planned. Specifically, Egyptian tactical formations refused to move and fight on their own initiative, and instead referred even the most minor decisions back to the highest authorities in Sanaa.<sup>117</sup>

This pattern was especially damaging in Yemen, where the mountainous terrain forced large formations to split into much smaller groups that had to be able to both work independently and coordinate their operations. In other words, the terrain--and the nature of COIN operations--forced the devolution of authority to the lowest levels, but Egyptian squad, platoon, company, and even battalion commanders rarely demonstrated the independent judgment and aggressiveness that were prerequisites for success in these circumstances. The result was that Egyptian tactical units were virtually helpless when they had to break up into small teams to try to clear insurgent positions in the severe terrain that dominates much of Yemen. The Royalists learned that when these small Egyptian formations were ambushed, they rarely tried anything imaginative or aggressive and simply took cover, fired back and screamed for aid, which rarely ever came because the commanders of the other nearby units would not take the initiative to respond. Thus it generally fell to higher echelons to try to organize a response, which rarely could be effected before the trapped unit was destroyed or surrendered. The Egyptians compounded these problems by insisting on dragging tanks and APCs into the rugged terrain, which their infantry failed to protect, allowing Royalist guerrillas to sneak up on them and destroy them with explosives or light anti-tank weapons.<sup>118</sup> By 1965, one former US military officer in Yemen estimated that the Egyptians were suffering about ten casualties for every one inflicted on the Royalists.<sup>119</sup>

### *The Egyptian Defeat*

In March 1965, the change in fortunes was further illustrated by a Royalist offensive in eastern Yemen. The Royalists captured the town of Harib (first taken by the Egyptians during the Ramadan offensive) in a surprise attack. They then rushed 400 of their newly-trained "semi-regulars" to Harib where they constructed defenses and earthworks to hold the town. The Egyptians sent a large armored force to retake the town which the semi-regulars decisively defeated at al-Jubah. The Egyptians were outmaneuvered by the Royalists and the Egyptian infantry failed to coordinate its activity with their armor, leaving the tanks easy marks for Royalist anti-tank teams.<sup>120</sup>

Despite this conventional success, the Royalists increasingly turned to a more traditional insurgent "starvation" strategy. The Egyptians held the main towns and cities,

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<sup>115</sup> Rahmy, pp. 152-153; Schmidt, pp. 215-222; Smiley, pp. 177-178.

<sup>116</sup> Smiley, p. 195.

<sup>117</sup> Rahmy, p. 158; Schmidt, pp. 55, 130-134.

<sup>118</sup> Rahmy, p. 158; Schmidt, pp. 55, 130-134, 173, 232.

<sup>119</sup> Schmidt, pp. 130-131.

<sup>120</sup> Rahmy, p. 153; Schmidt, p. 215.

and could defend them with enough firepower to make any Royalist attack on them very painful. However, the Egyptians and Republicans ventured out into the countryside less and less and instead concentrated on keeping the roads open to their far-flung garrisons. The Royalists turned to cutting the lines of communication and supply linking the Republican-held towns to starve out their garrisons. Because of the growing advantage of the Royalists in conducting ambushes and hit-and-run operations, the Royalist stranglehold over the Egyptian and Republican forces grew tighter and tighter. The Egyptians were forced to commit a considerable percentage of their airlift capacity to Yemen to airlift--or airdrop, in many cases--supplies to beleaguered strongholds. Cairo's initial response to this strategy was to send additional troops to Yemen to try to keep the roads open and by mid-1965 its force in Yemen had grown to about 70,000 men. Then, to try to reverse the tactical imbalance in the Royalists' favor, the Egyptians began employing chemical warfare (CW), which caused some panic among the Royalist forces at first. However, when it became clear that CW was not terribly effective in the climate and terrain of Yemen against small, highly mobile bands of guerrillas, this advantage too faded away.<sup>121</sup> Finally in late 1965 the Egyptians turned to what they referred to as the "Long Breath Policy."

The Long Breath policy was actually very similar to the Nixon administration's policy of "Vietnamization." Nasser had concluded that Egypt had squandered enough men and treasure on Yemen and was looking for a way to cut his losses. He decided that Egyptian troop levels would be greatly reduced and by early 1966 Cairo's strength in Yemen had been cut to 40,000 men.<sup>122</sup> Under the Long Breath policy, Egyptian forces took responsibility for defending the key cities of Yemen, and providing air and heavy weapons support to Yemeni units in certain circumstances. Training of Republican forces was increasingly turned over to the Russians (who the Yemenis found were much better instructors than the Egyptians), and the Egyptians increasingly left the conduct of Yemeni field operations in the hands of the Republicans and their tribal allies of the moment.<sup>123</sup> In addition, Nasser began looking for a negotiated settlement so that he could withdraw altogether. However, Nasser was unwilling to simply cut and run, and he demanded concessions from the Royalists and their Saudi backers before he would pull out completely. Nevertheless, Cairo continued to draw down its forces in Yemen. By June 1967, only about 20,000 Egyptian troops remained there, and most of the better combat formations had long been withdrawn.<sup>124</sup> After the Six-Day War, the Egyptians drew down their strength even further, and at the Khartoum summit in August 1967, Nasser agreed to withdraw from Yemen completely in return for massive Saudi financial aid to repair the damage to the Egyptian military caused by the Israelis.<sup>125</sup>

### **General Observations on Egyptian Military Performance in Yemen, 1962-1967**

The Egyptian performance in Yemen was not without redeeming features, but these were few and far between. In particular, the Egyptian logistical effort merits some praise. Cairo's quartermaster corps moved and maintained a force of as many as 70,000 soldiers in the field over 2,000 miles away. Because of the poverty of the Yemeni economy, Egypt could not rely on the local infrastructure for anything but the most meager rudiments. Instead, virtually all provisions had to be brought down the Red Sea from Egypt itself. For five years the Egyptians moved and supplied these forces without significant problems. Of course, supply eventually became a critical issue in the campaign, but the problem was not

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<sup>121</sup> Schmidt, pp. 260-285.

<sup>122</sup> Rahmy, p. 155.

<sup>123</sup> O'Ballance, *The War in the Yemen*, p. 199.

<sup>124</sup> O'Ballance, *The War in the Yemen*, p. 182; Rahmy, p. 251.

<sup>125</sup> Nadav Safran, *Saudi Arabia: The Ceaseless Quest for Security*, First Paperback Edition, (Ithaca, NY: Cornell University Press, 1988), p. 122.

the ability of Egyptian logistics to support their troops but the ability of Egyptian combat forces to keep the supply routes open. In other words, the problem was a tactical military failure, and not a logistical failure *per se*.<sup>126</sup>

Having detailed the constant problems afflicting Egyptian tactical effectiveness above, I will not repeat them here. However, what is worth noting is that as early as 1964 Cairo recognized that its tactical formations were not getting the job done and took a number of steps to deal with it. Egypt kept feeding troops into Yemen, eventually bringing the expeditionary force there to over 70,000 men in an effort to use quantity to overcome its tactical problems. Later on, Cairo began recruiting ever larger numbers of university graduates into the Army to try to improve the quality of the junior officer and NCO corps. Chemical warfare was Egypt's final bid and this too proved inadequate.<sup>127</sup>

Three points need to be made about the effectiveness of Egypt's senior military leadership in Yemen. First, Cairo's senior officers generally performed better than most of its junior officers. Egyptian senior leaders were far more creative and aggressive in their prosecution of operations than were the battalion and company commanders in the field. Also, the higher echelons of command paid much greater attention to combined arms and the need to employ maneuver rather than firepower alone.

Second, Egypt's major offensives were frequently very impressive *conventional* military operations. In particular, Amer's Ramadan offensive and Murtagi's various campaigns deserve high marks. They were well-planned, made excellent use of operational maneuver to try to crush the Royalists, effectively concentrated large numbers of Egyptian troops well-supported by heavy weaponry, and were innovative and clever. Against a conventional enemy, these operations might have produced decisive results--although the poor tactical performance of Egyptian forces strongly suggests that it is unlikely they could have properly executed these plans against a conventional adversary.

Third, while the various Egyptian offensives were admirable conventional operations, *they were not counter-insurgency operations*. This was a crucial failing of the Egyptian effort in Yemen. Egypt's generals never seem to have figured out how to defeat a guerrilla force. They appear to have believed that this was simply a conventional military problem to which conventional military solutions could be applied. Thus Egyptian failure in Yemen must be considered a product of both poor tactical performance and poor strategy. As the Americans would later learn in Vietnam, even a tactically competent military still cannot defeat an insurgency without a true COIN strategy.<sup>128</sup> However, one cannot heap all the blame on Cairo's generals, because it seems doubtful that the tactically ineffective forces at their disposal would have been able to successfully implement even a very good counter-insurgency strategy. Ultimately, either of these failings would probably have been enough to doom the Egyptian intervention in Yemen alone, and their combination simply made the experience that much more painful.

### **The Six-Day War, 1967**

The destruction of the Egyptian military in the Six-Day War was one of the worst military disasters in modern history. A wide variety of factors contributed to this catastrophic failure including a poor performance on the part of Egypt's high command. However, even more damaging still was the continuing inability of Egypt's tactical forces to match the Israelis in fluid, fast-paced armor operations. Commissariat politicization was

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<sup>126</sup> Rahmy, pp. 159-160.

<sup>127</sup> Barnett, p. 101; Be'eri, p. 230.

<sup>128</sup> On US reliance on a conventional war strategy rather than a COIN approach, see in particular, Andrew F. Krepinevich, Jr., *The Army in Vietnam*, (Baltimore: Johns Hopkins, 1986).



rampant in the Egyptian military at this point, although praetorianism continued to recede as a concern and had little impact on the Egyptian military. Traditional forms of palace-guardism also were absent, but a new form crept in and exerted some influence on Egyptian military preparations. Soviet involvement in Egypt deepened as did Soviet influence on Egyptian military practices. Although Egypt remained an underdeveloped state, it showed considerable socio-economic growth: between 1950 and 1967 the number of inhabitants per automobile had fallen from 340 to 287 in 1966, per capita energy consumption had increased from .15 metric tons of coal equivalent to .3, and the literacy rate had climbed from 15 to nearly 37 percent.<sup>129</sup>

### **Egyptian Military Developments, 1962-1967**

During the 1960s two trends dominated developments in the Egyptian military: deepening commissariat politicization and increasing reliance on Soviet weapons and military practices. Although the Egyptian armed forces continued to have an internal security role, this mission gave way to external security considerations as the involvement in Yemen dragged on and as Nasser shifted his power base away from the armed forces. Praetorianism too receded into obscurity as the Free Officers were increasingly "civilianized." On these trends, Richard Dekmejian remarked that:

As a ruling class, the ex-officers and civilian technocrats around Nasser could not regard the Army as their primary client; they now had larger popular constituencies to satisfy . . . . While the Army provided the primary prop for Nasserite control in the early years of the Revolution, gradually the regime amassed a significant degree of popular legitimacy, uncommon to most praetorian situations. The legitimacy was of the charismatic type which Nasser almost single-handedly derived from his foreign confrontations and exploits after the mid-1950s.<sup>130</sup>

Field Marshal Amer, General Shams Badran (The Minister of War) and Lt. General Sidqi Mahmud (Commander of the Air Force), were all military officers who had reached their positions because of their association with Nasser and the Free Officers. This is not to say that they were wholly undeserving of their positions. For example, as an artillery officer in the 1948 war Amer had fought very well, particularly distinguishing himself at Yad Mordechai and Nitzanin. Although some of Cairo's political leaders privately criticized his leadership during the 1956 fighting, Amer was highly respected among the Egyptian officer corps for his conduct of the 1963 Ramadan offensive in Yemen. Nevertheless, Amer had not come up the chain of command in any sort of normal fashion and it had been his political links that brought him to his position of authority. With the regime firmly in power and Nasser and most of the other Free Officers heavily distracted with foreign and domestic policy, this troika set out to turn the military into their own personal creature. Originally, their loyalty to the regime was unquestionable and the moves they made undoubtedly were designed to assure the loyalty of the Army to the regime in general. However, over time they began to see the armed forces as their own personal domain and a base from which they might assert their authority in other areas. There is even reason to believe that Amer saw his personal control of the armed forces as a means of securing either his succession to Nasser, or possibly even replacement of Nasser.<sup>131</sup>

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<sup>129</sup> The World Bank, *World Tables*, 1949-1976; The World Bank, *World Development Report*, (Washington, DC: The World Bank, Various years); United Nations, *Statistical Yearbook*, various years, (NY: The United Nations).

<sup>130</sup> Richard H. Dekmejian, "Egypt and Turkey: The Military in the Background," in Roman Kolkowicz and Andrej Korbonski eds., *Soldiers, Peasants and Bureaucrats: Civil-Military Relations in Communist and Modernizing Societies*, (London: George Allen and Unwin, 1982), p. 35.

<sup>131</sup> Be'eri, p. 108; Field Marshal Mohamed Abdel Ghani El-Gamasy, *The October War*, Translated by

Amer made the Egyptian military his private fiefdom. He did this by promoting officers loyal to him, not necessarily to the regime, and not necessarily competent officers either.<sup>132</sup> Key unit commanders throughout the armed forces were political hacks who owed their positions solely to Amer's patronage and demonstrated little ability when forced to perform in battle. Amer, and Nasser, also excluded from the military those groups they considered subversive or undesirable. In particular, Nasser's old rivals the Muslim Brotherhood were scrupulously weeded out of the military in sudden, large-scale purges of the officer corps, the last of which before the war was in 1965-1966.<sup>133</sup>

Some slight palace-guardism resurfaced in the Egyptian military in the form of distractions from the business of preparing for conventional military operations. Amer and Badran increasingly employed the Armed Forces in other than military tasks to advance their private agendas and increase the regime's reliance on the Army in all areas. After the Six-Day war, General Muhammad Fawzi testified that:

The Armed Forces became involved in land reclamation, housing, the national transport system, state security, the Aswan High Dam, and many other activities. Their agents could be found in the administration of most of these organizations, representing the Field Marshal [Amer] and Shams [Badran]. . . . For the record, I would like to report that the growing power of the Armed Forces in civilian life was detrimental to its main responsibility which was to be a fighting force, ready for battle.<sup>134</sup>

Especially after the Suez-Sinai war, Cairo's desire for independence from Britain and the West led it to increasing dependence on the USSR for military hardware and expertise. In the late 1950s Egypt had laid the foundations for a domestic arms industry to end its dependence on foreign armaments altogether, but this project had proven deeply disappointing and by 1967 Egypt's arms factories could not even meet the needs of the armed forces for small caliber ammunition.<sup>135</sup> Thus Egypt had to make do with Soviet arms, buying massive quantities of Soviet weaponry. The Egyptian military also was reorganized along Soviet lines and increasingly relied on Soviet tactics and doctrine. The Egyptians began rebuilding their defenses in Sinai along Soviet fortification patterns and in accord with Soviet defensive doctrine.<sup>136</sup>

Nevertheless, the Soviet presence in Egypt and the Egyptian reliance on Soviet practices should not be overstated either. By June 1967 there were still only 500 Soviet advisers in Egypt and the vast majority of these were simply weapons instructors.<sup>137</sup> Soviet advisers were not attached to Egyptian tactical formations, nor did Soviet personnel routinely accompany Egyptian deployments and exercises.<sup>138</sup> In addition, the Egyptians adopted Soviet tactics selectively, retaining Turkish, British, and even indigenous practices in a wide range of areas. For example, the rebuilt Egyptian defenses at Abu Ageilah-Umm

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Gilian Potter, Nadra Marcos, Rosette Frances, (Cairo: The American University in Cairo Press, 1993), p. 83; Edgar O'Ballance, *The Electronic War in the Middle East, 1968-1970*, (London: Faber and Faber Ltd., 1974), p. 24; Brigadier Peter Young, *The Israeli Campaign, 1967*, (London: William Kimber, 1967), p. 98.

<sup>132</sup> George Gawrych, "The Egyptian High Command in the 1973 War," *Armed Forces and Society*, Summer 1987, p. 542.

<sup>133</sup> Gawrych, "The Egyptian High Command in the 1973 War," p. 544.

<sup>134</sup> Quoted in Gamasy, p. 85.

<sup>135</sup> Norman Friedman, *Desert Victory*, (Annapolis, MD: Naval Institute Press, 1991), p. 111; Ze'ev Schiff, *A History of the Israeli Army*, (NY: Macmillan, 1985), pp. 198-199.

<sup>136</sup> Eric Hammel, *Six Days in June*, (NY: Scribner's, 1992), p. 140; O'Ballance, *The Electronic War in the Middle East*, p. 52.

<sup>137</sup> Edgar O'Ballance, *The Third Arab-Israeli War*, (Hamden, CT: Archon Books, 1972), p. 90; Safran, *From War to War*, p. 439.

<sup>138</sup> Luttwak and Horowitz, p. 300.

Qatef were a combination of Soviet linear defenses and the British "hedgehog" approach.<sup>139</sup> Consequently, while the Egyptians mimicked the Soviet style of military operations in some ways, they were far from being carbon copies.

### The Armies on the Eve of War

Unlike in 1956, in June of 1967 Egypt concentrated its army in Sinai against Israel. Egypt massed 100,000 of its 160,000 troops in Sinai. Although about one-third of these troops were reservists, at least another third, and possibly many more, were veterans of the conflict in Yemen.<sup>140</sup> The forces in Sinai were organized into seven divisions (four infantry, two armored, one mechanized infantry), four independent infantry brigades, and four independent armored brigades. The Egyptian army in Sinai fielded 950 tanks, 1,100 APCs, and over 1,000 artillery pieces. In addition, the Egyptian Air Force boasted over 400 aircraft, including over 100 of the USSR's latest fighter, the MiG-21, and 30 supersonic Tu-16 bombers.<sup>141</sup>

Against the Egyptians, Israel deployed less than 70,000 men in six armored brigades, an infantry brigade, a mechanized infantry brigade and three paratroop brigades. Eight of these brigades were grouped into three divisional task forces--*ugdot* in Hebrew. The Israelis disposed of over 700 tanks against the Egyptians. The Israeli Air Force had a bit more than 200 combat aircraft, of which, 72 were sophisticated French Mirages while the rest were much older Mysteres, Super-Mysteres, Ouragons, and Vautours. However, the IAF also had to deal with Syria, Jordan, and possibly Iraq, whereas the EAF was free to concentrate fully against Israel.<sup>142</sup>

Thus Egypt possessed a significant, albeit not overwhelming, numerical advantage over the Israeli forces ranged against it. Egypt also possessed something of an advantage

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<sup>139</sup> Gawrych, *Key to the Sinai*, p. 81.

<sup>140</sup> After the Six-Day war, one excuse the Egyptians offered for their defeat was that huge numbers of their troops--and most of their best troops--were still in Yemen. What's more, many Westerners continue to parrot this excuse, claiming that as much as "one-third of the Egyptian army" or 50-60,000 troops were still in Yemen. This claim is untrue. The various accounts of the Yemeni Civil War--not the accounts of the Six-Day war, which often display a deep ignorance of Egyptian operations in Yemen--all agree that by the beginning of June 1967, that is, before the Six-Day War, the Egyptians had reduced their forces in Yemen to about 20,000 men. (O'Ballance, *The War in the Yemen*, p. 182; Rahmy, pp. 251-252; Schmidt, p. 290. Also see, O'Ballance, *The Third Arab-Israeli War*, p. 99; Safran, *From War to War*, p. 332.) It is also untrue that the forces remaining in Yemen were the best in the Egyptian army. In fact, largely the opposite was true. While elite Egyptian paratroopers still garrisoned Sanaa, the better Egyptian line formations had already been withdrawn in response to Nasser's growing desire to extricate himself from the morass he had helped create there. Indeed, the "cream" of the Egyptian Army was deployed in Sinai. Without question, the best formations in the Egyptian military in 1967 were the 4th Armored Division, 6th Mechanized Division, and 2nd Infantry Division, all of which were deployed in Sinai. (For a concurring opinion regarding Egyptian unit quality, see Hammel, pp. 144-145.) Indeed Israeli military intelligence considered the 4th Armored Division to be the single best formation in the Egyptian Army, and keyed on its movements as a sign of Cairo's intentions. [Samuel M. Katz, *Soldier Spies: Israeli Military Intelligence*, (Novato, CA: Presidio, 1992), p. 183]. Moreover, Cairo kept up a regular rotation of troops through its units in Yemen to keep morale high and ensure that the maximum number of soldiers and officers had some combat experience. Thus by June 1967, virtually all of Egypt's professional soldiers and many conscripts had served in Yemen. (For instance, see Rahmy, p. 252) Indeed, there were so many veterans of the Yemeni war among the Egyptian forces in Sinai that Trevor Dupuy believes Nasser may have been emboldened in his diplomatic moves before the war, believing his "veteran" army to be more capable than it was. Dupuy, p. 235.

<sup>141</sup> George Gawrych, "The Egyptian Military Defeat of 1967," *Journal of Contemporary History*, Vol. 26, 1991, p. 279; Hammel, pp. 44, 145; Herzog, *The Arab-Israeli Wars*, p. 152; Israel Ministry of Defense, *The Six-Day War*, (Israel: Israel Press, 1967), p. 52; O'Ballance, *The Third Arab-Israeli War*, p. 99; O'Ballance, *The Electronic War in the Middle East*, p. 32;

<sup>142</sup> Cohen, p. 194; Dupuy, p. 244; Hammel. pp. 149-150; Yonay, p. 187.

in the quality of its equipment. Before the war, this was the opinion of the Soviets and the Egyptians, and after the war--after they had had the opportunity to examine and test captured Egyptian equipment--the Israelis reached the same conclusion. In some categories such as tanks and fighter aircraft, the two sides were about evenly matched, however, in most other areas the Egyptians had a meaningful advantage. The workhorse of Israel's armored corps was the original British Centurion, which although badly underpowered and unreliable, nevertheless had a powerful gun and decent armor.<sup>143</sup> Still, less than half the tanks Israel deployed to Sinai were Centurions. By contrast, the majority of Egyptian tanks facing Israel were Soviet T-55s, which most of the Israelis found to be a superior all-around tank to those they possessed, except for the Centurion.<sup>144</sup> Egypt's Soviet armored personnel carriers, artillery, anti-tank weapons, communications gear, and most of its crew-served infantry weapons were more modern and capable than the largely obsolete equipment Israel had scrounged from the West. For instance, the Egyptians relied primarily on Soviet BTR-50s and -60s as their primary armored personnel carriers, whereas the Israelis relied exclusively on old US M-3 halftracks which lacked the armament and armor of the BTRs. The Egyptians' Soviet artillery pieces could accurately deliver rounds at considerably greater ranges than the Western guns the Israelis used. In the air, the Israelis--who had obtained a working MiG-21 from an Iraqi defector--concluded that the Mirage was a somewhat better plane than the new MiG, but the MiG was clearly superior to the other French planes in Israel's Air Force.<sup>145</sup>

Another important advantage Egypt possessed was its rebuilt and improved defensive positions in Sinai. This time with Soviet aid, the Egyptians had refortified the peninsula to withstand an Israeli offensive. The Egyptians had done a pretty good job too. First, they recognized the primary avenues of advance across Sinai and built major defensive positions along all of them. Second, they learned from the experience of 1956 and tried to correct mistakes they had made then, such as leaving the al-Kuntillah/ath-Thamadah/an-Nakhl axis lightly defended and failing to guard the flanks of the Abu Ageilah position. However, the Egyptian defensive scheme was far from perfect. Two problems in particular would loom large during the course of the fighting. First, the Egyptian fortifications were built "by the book." No modifications were made for the terrain, for the capabilities of the Egyptian defenders, or for the style of the Israeli attackers. The Egyptians essentially took the Soviet manuals and carved out the examples they found there in the rock and sand of Sinai.<sup>146</sup> Second, the Egyptians believed that a great deal of terrain was impassable when in fact it could be traversed, albeit with difficulty. In particular, the Egyptians decided that the vast stretch of sand dunes between Umm Qatef and the Gaza strip was impassable, and they anchored the newly-extended lines of the Abu Ageilah and Rafah defensive positions on this terrain.<sup>147</sup>

During the crisis that unfolded in the weeks before the war, Egypt took a variety of additional steps that entailed very significant changes to its military organization, command and control, and deployment scheme. First, Amer created an intermediate command echelon between the General Staff and the eastern military district commander, Lt. General Salah ad-Din Muhsin. This command, the Sinai front command, he entrusted to General

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<sup>143</sup> The Israelis--and the British--would later upgrade the Centurion with a new engine and the superb L105 gun in addition to a variety of other improvements.

<sup>144</sup> Dupuy, p. 238; Katz, p. 183; O'Ballance, *The Third Arab-Israeli War*, pp. 93; 170-171; Perlmutter, p. 180; Safran, p. 318.

<sup>145</sup> Dupuy, p. 238; Gawrych, *Key to the Sinai*, pp. 98-99; O'Ballance, *The Third Arab-Israeli War*, pp. 93; 170-171; Perlmutter, p. 180; Safran, p. 318; Emanuel Wald, *The Wald Report: The Decline of Israeli National Security Since 1967*, (Boulder, CO: Westview, 1992), p. 89.

<sup>146</sup> Brigadier Syed Ali El-Edroos, *The Hashemite Arab Army, 1908-1979*, (Amman, Jordan: The Publishing Committee, 1980), p. 358.

<sup>147</sup> Dupuy, pp. 249, 259, 263; Hammel, p. 199; Young, p. 99.

Murtagi who had returned from Yemen in May 1967.<sup>148</sup> Second, Cairo replaced the commanders and chiefs of staff of six of its divisions in Sinai (all but the "Palestinian" 20th Infantry Division). It is unclear why Egypt did this, but in some of the few cases where information is available, Amer replaced political hacks with veteran commanders who had fought in Yemen. This suggests Amer was trying desperately to undo some of the damage of his politicization by removing his cronies and replacing them with proven soldiers.<sup>149</sup> Third, to beef up the army in Sinai the Egyptians recalled to duty tens of thousands of reservists. However, rather than organizing them into totally separate formations, Cairo inserted them throughout the command structure to fill-out understrength units or reinforce others charged with critical missions. Thus some units received reservists to fill out their ranks, while others were merged with existing reserve units. These various moves probably hurt unit cohesion.<sup>150</sup>

Probably the most disruptive of Cairo's actions in the weeks prior to the Israeli attack was its constant changes in the mission of the army in Sinai and the redeployments they entailed. Cairo had moved forces back into Sinai primarily as a show of force on Syria's behalf. However, Nasser's goals and objectives appear to have run the gamut during the crisis and this was reflected in his orders to the military. The General Staff changed the Egyptian operational plan four times during May 1967. One plan even envisioned an offensive into Israel to take the southern port of Eilat. Every time the plan changed, Egyptian forces were uprooted and moved to another location. In some cases the changes were fairly significant, and in others, the constant movement from one point to another back and forth across Sinai exhausted the men and vehicles.<sup>151</sup>

When the Egyptians finally settled on an operational plan for the defense of Sinai it was not the one originally envisioned. The original plan, entitled "Qahir" (Victory), called for a mobile, defense-in-depth. Infantry screening forces were to be deployed in the

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<sup>148</sup> There is a lingering question as to why Amer suddenly introduced this new echelon into the chain of command only weeks before the outbreak of the war but failed to properly define the role he expected it to play. Virtually everyone in the Egyptian high command--including Murtagi--believed it to be superfluous and Murtagi recommended it be eliminated, but Amer insisted. My sense is that this decision is related to Amer's increasing anxiety before the Six-Day war. Amer has left no explanation for this move, but an obvious answer is that in May 1967, faced with the prospect of another war with Israel he was attempting to get Murtagi into the chain of command. Little is known about General Muhsin, but the mere fact that he held a high post under Amer strongly suggests he was a political hack. Indeed, Gamasy criticizes him for abandoning his post at the moment when Amer ordered the retreat from Sinai--the most critical point in the entire war--an action that sounds more like a political appointee trying to save his skin than a professional military officer concerned about the well-being of his troops. (Gamasy, pp. 65-66) On the other hand, Murtagi had proven himself a highly-capable officer time and again in Yemen (notwithstanding his inability to understand the nature of guerrilla warfare). It seems likely that Amer hoped to insert Murtagi into the chain of command to ensure that he had a veteran general in command, rather than the at best untried Muhsin, but without the disruption of sacking Muhsin and replacing him with Murtagi. Gamasy notes that none of the Egyptian generals believed the Israelis would attack when Amer created this command, thus sacking Muhsin might have unnecessarily made a political enemy for Amer in the event that there was no war. Alternatively, Amer might have feared that a sudden shake up among the top leadership would panic the troops in Sinai--or the Israelis--and instead wanted to preserve a sense of business-as-usual. Given either of these considerations, creating a temporary command superior to Muhsin's would have been a clever way for Amer to have his cake (getting Murtagi, his best veteran commander into a position where he could control the army in Sinai) and eat it too (not having to relieve Muhsin). Amer's statement to Murtagi that he planned to run the battle with Murtagi from Murtagi's headquarters in western Sinai also suggests that he wanted Murtagi's advice and expertise when making decisions in the event of war. See Gamasy, pp. 45-66.

<sup>149</sup> See for example, Gawrych, *Key to the Sinai*, pp. 77, 86.

<sup>150</sup> Gawrych, "The Egyptian Military Defeat of 1967," pp. 284-285.

<sup>151</sup> Gawrych, *The Egyptian Military Defeat of 1967*, pp. 284-285; Gawrych, "The Egyptian High Command in the 1973 War," p. 540; O'Ballance, *The Third Arab-Israeli War*, pp. 99-100.

fortifications of eastern Sinai, to delay and disrupt the Israelis, while the bulk of the army, and virtually all of its heavy forces would be held back in the B'ir Gifgafah and B'ir ath-Thamadah areas. When the Israelis penetrated into central Sinai, these forces would conduct a double envelopment of the Israeli units and obliterate them in a gigantic kill-sack.<sup>152</sup> In May 1967, however, Nasser forbade the General Staff from proceeding with the Qahir plan, and instead ordered a forward defense of Sinai. Nasser apparently disliked the fact that, by opting for a defense-in-depth, the Qahir plan meant the virtual abandonment of Gaza, Rafah, and al-Kuntillah as well as the likely loss of the extensive Egyptian defensive positions at al-'Arish and Abu Ageilah. Nasser may also have been concerned that Israel might opt for a limited offensive to seize the Gaza strip or Rafah and expel the exiled Palestinians and their *fedayeen* bases. In any event, the GHQ duly complied with his wishes and repositioned their forces for a forward defense of Sinai.<sup>153</sup>

The last piece of the puzzle that made up the background to the military operations in June 1967 was the role of surprise. There was a colossal failure on the part of Cairo's intelligence services to provide the Egyptian military with the information required to fight Israel. The first mistake Egyptian intelligence made was that it could not decide for itself whether or not it actually believed Israel was going to attack, and instead issued contradictory reports from one day to the next, depending largely on which way the political wind was blowing in Cairo.<sup>154</sup> However, this was not really an egregious lapse because it seems to have had little impact on the Egyptian forces in Sinai. The crisis itself prompted the General Staff to take additional precautions, and Field Marshal Gamasy notes that Nasser was certain by 2 June that Israel would attack, and as a result Egyptian forces in Sinai were placed on alert on 3 June.<sup>155</sup> Far more damaging was Egyptian military intelligence's failure to provide any useful information regarding the size, deployment, training, and doctrine of the IDF or its concept of operations for the impending war. Cairo had little idea where Israeli forces were, and the only formation it was sure about--an armored brigade deployed opposite Qusaymah--turned out to have been an Israeli ruse. Nevertheless, based on this intelligence, the GHQ shifted some of its forces, in particular the 6th Mechanized division, to cover the threat from this decoy brigade.<sup>156</sup> Egypt had no idea what the Israeli attack would look like, what its objectives would be, or where its major thrusts would come, although the misidentification of the armored brigade at Qusaymah led them to believe it would be a repeat of the 1956 invasion with the deepest thrusts occurring in south-central Sinai.<sup>157</sup> Finally, Egyptian military intelligence just didn't know how the Israeli military fought, they didn't know what its tactics were, they didn't understand its emphasis on speed and constant forward movement, they didn't understand its decentralized command structure, they didn't understand its emphasis on flexibility and ad hoc operations, they didn't understand its reliance on armor supported by air power, and they didn't understand its commitment to preemption.<sup>158</sup> Moreover, the little bits of intelligence Cairo had on the Israelis were consistently evaluated incorrectly, further adding to the confusion on the Egyptian side.<sup>159</sup> Consequently, the Egyptian forces in Sinai knew little about their adversary and either assumed the Israelis were very much like themselves, or didn't consider how Israeli forces might operate at all.

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<sup>152</sup> Dupuy, pp. 240-241; Gawrych, "The Egyptian Military Defeat of 1967," pp. 284-285; Hammel, pp. 145-146.

<sup>153</sup> Dupuy, p. 241; Gawrych, "The Egyptian Military Defeat of 1967," p. 285.

<sup>154</sup> El-Edroos, pp. 418-419; Gamasy, p. 46.

<sup>155</sup> Gamasy, pp. 46, 58.

<sup>156</sup> Gamasy, p. 46; Gawrych, "The Egyptian Military Defeat of 1967," pp. 285-290.

<sup>157</sup> Gamasy, p. 46.

<sup>158</sup> El-Edroos, pp. 418-419; David A. Korn, *Stalemate: The War of Attrition and Great Power Diplomacy in the Middle East, 1967-1970*, (Boulder, CO: Westview, 1992), p. 91.

<sup>159</sup> Schiff, p. 142.

## The Israeli Airstrikes

As has become a part of legend, the Israelis began the Six-Day war with a massive, surprise air strike against Egypt that effectively eliminated the Egyptian Air Force as a factor in the war. In late 1965, the Israelis had begun the practice of sending huge flights of aircraft out over the Mediterranean every morning, to desensitize Egypt's early warning radar commands. Thus on the morning of 5 June when Israel sent virtually its entire air force out over the Mediterranean, the Egyptians thought nothing of it, having seen such operations countless times before, but on this occasion, the Israelis dove down to near sea level (below Egyptian radar coverage) and turned south to strike air bases throughout Sinai and northeastern Egypt. Israeli intelligence was outstanding, having pinpointed the location of every Egyptian squadron, revealed the layout of every air base, and mastered every detail of Egyptian Air Force operational procedure.<sup>160</sup> The Israelis had timed their attack perfectly, catching the EAF after all of its morning patrols had landed, its senior commanders were fighting Cairo's traffic to get to their offices, and its pilots were eating breakfast with hardly anyone standing strip alert. For three hours, every ten minutes, ten flights of four Israeli aircraft attacked airfields and other installations throughout Egypt. As a result of this constant hammering by the tremendously skilled Israeli pilots, the Egyptian Air Force was devastated. During the course of the morning, the Israelis struck 18 of Egypt's Air Force bases, cratering runways, blowing up aircraft, and destroying support facilities. The Egyptians lost over 300 of their 420 combat aircraft, and 100 of their 350 qualified combat pilots.<sup>161</sup>

The lion's share of the credit for the success of the air attack must be granted to the sheer genius of the Israeli Air Force. However, Egyptian mistakes compounded that brilliance. The Israeli airstrikes caught General Mahmud, commander of the EAF, in the air over Sinai in an unarmed transport--along with Field Marshal Amer. Because the Israelis were attacking every base in the area there was no way for the plane to land, nor could Mahmud issue orders from the air for fear that the Israelis would realize he was airborne and shoot him down. Thus Mahmud was effectively taken out of the chain of command. In his absence, the Egyptian Air Force was paralyzed. Without specific authorization, the vast majority of Egypt's air force officers, from air sector commanders all the way down to pilots, were unwilling to take even the most obvious emergency procedures. One story recounted by Mohamed Heikal conveys the paralysis that gripped the EAF. According to Heikal, at one Egyptian air base the initial Israeli airstrike left three Sukhoi attack aircraft intact on the runway. Immediately, the Soviet adviser at the base urged the pilots assembled in the mess hall to quickly fly the planes to safety before the Israelis returned. However, to a man, the Egyptian pilots stated that they had no orders to do so and therefore refused. Less than fifteen minutes later the second wave of Israeli aircraft appeared and destroyed the three aircraft.<sup>162</sup> Only eight MiGs rose from the attacked airfields to challenge the Israelis and all were shot down--although they did manage to shoot down two Israeli Mysteres conducting airstrikes before being shot down by escorting Mirages. The Israelis generally only attacked the Egyptian bases in the Sinai and Nile delta areas, thus numerous Egyptian air bases in the rest of the country were completely undamaged and could have sent fighters to intercept the attackers, but only one airbase commander was willing to take the initiative to do so. The commander at Hurgadah dispatched 12 MiG-21s and 8 MiG-19s to fight the intruders. Four of these MiGs were shot down in dogfights without doing any damage to the Israelis, and the rest

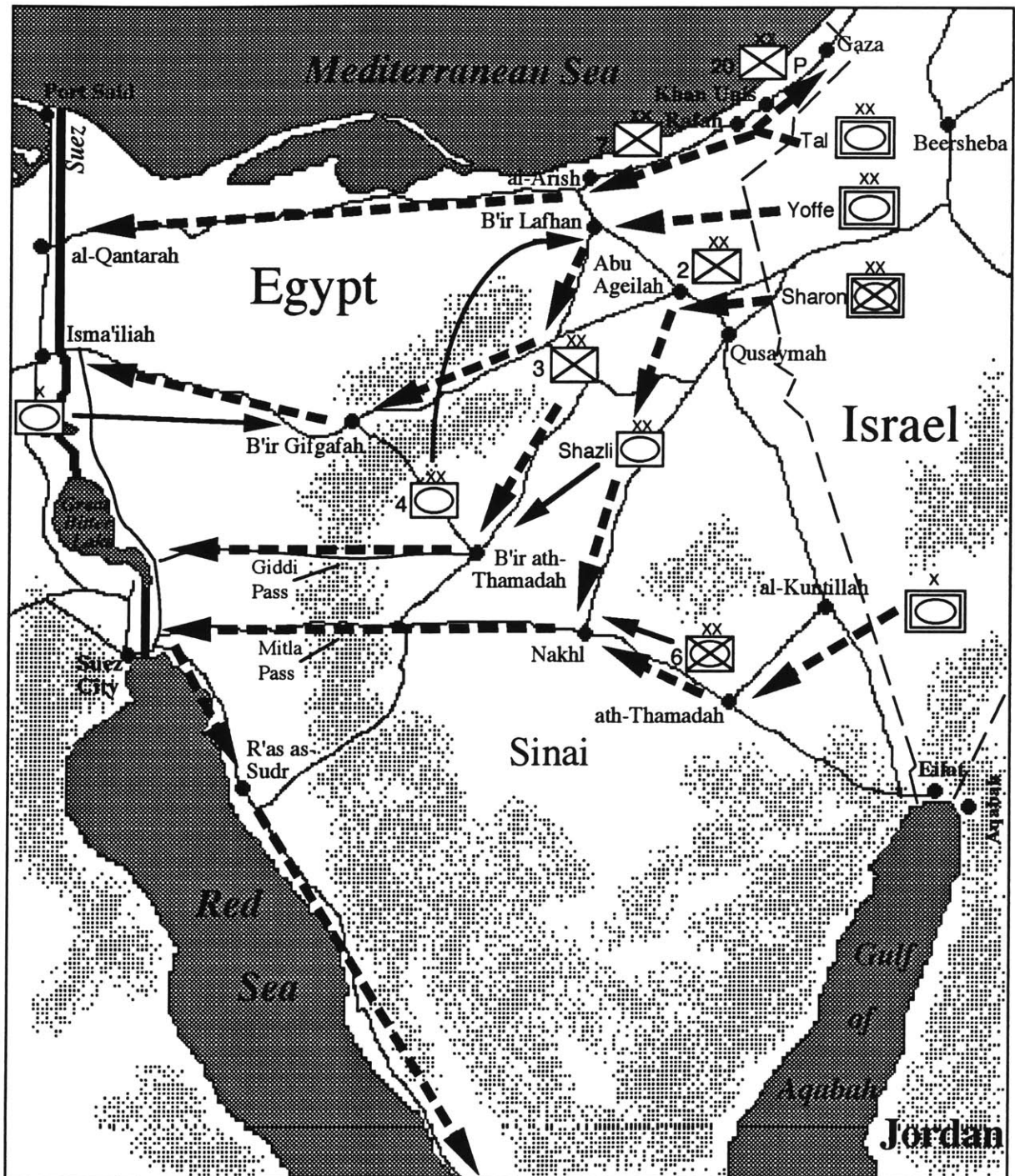
<sup>160</sup> In fact, Israeli Air Force intelligence had even determined which planes at which airbases were real and which were decoys. Hammel, pp. 167-168.

<sup>161</sup> Cohen, pp. 193-217; Dupuy, pp. 245-247; Hammel, pp. 165-171; Herzog, *The Arab-Israeli Wars*, pp. 151-153; Katz, p. 191; Yonay, pp. 202-213, 231-244.

<sup>162</sup> Col. V. E. Badolato, USMC, "A Clash of Cultures: The Expulsion of Soviet Military Advisors from Egypt," *US Naval War College Review*, Vol. 37, No. 2, Mar-Apr 1984, pp. 70-71.



# The Israeli Conquest of Sinai, June 1967



- ▶ - Egyptian moves
- - -▶ - Israeli attacks

- - Egyptian units
- - Israeli units



were destroyed when they fled the battle but then could not find an uncratered runway before they ran out of fuel.<sup>163</sup>

### **The Israeli Invasion**

Soon after the first airstrikes went in against the Egyptian air bases, the Israeli Army began its attack on Sinai. The Israeli plan essentially was to do the opposite of what they had done in 1956. Whereas in 1956 they began the operation with a drive across south-central Sinai and only attacked in the north when the southern attack had unhinged Egypt's defenses, in 1967 their main attack came in northern Sinai. Brig. General Israel Tal's *ugdah* of two armored brigades and a paratroop brigade was to take Rafah and then roll westward, overrunning al-'Arish and securing the northern route to the canal. Brig. General Ariel Sharon's *ugdah* of an armored brigade, a paratroop brigade, and an infantry brigade would take Abu Ageilah and then drive westward toward the Mitla pass. Brig. General Avraham Yoffe's *ugdah* of two armored brigades would push into the sand dunes between Tal and Sharon's sectors which the Egyptians considered impassable. Yoffe would support either or both of the other two Israeli *ugdot* with flank attacks as needed and by preventing the Egyptians from themselves launching a flank attack against either Tal or Sharon. As was their custom, the Israelis had only vague guidelines for their exploitation to the canal because they expected to improvise this operation as the course of battle unfolded.<sup>164</sup>

### *The Battles of Rafah and al-'Arish*

The Rafah/al-'Arish sector was defended by multiple lines of earthworks and fortifications and manned by the Egyptian 7th Infantry Division supported by an independent armored brigade. The Israeli 7th Armored Brigade, the elite of Israel's armored corps, led Tal's assault on the Rafah position. The 7th Armored Brigade punched through the Egyptian defensive positions where the Gaza strip meets the Egyptian border. Although the Israelis made good progress and effectively destroyed the Egyptian units they faced, they took fairly heavy casualties (by Israeli standards). The Egyptians fought extremely hard from their fixed defenses, and for the most part, no matter how accurate the Israeli fire or how devastating the Israeli maneuvers, the Egyptians stayed at their posts and kept firing until they were physically silenced. Egyptian artillery was also quite deadly at first while the Israelis had to move through the pre-registered fire zones guarding the fortifications.<sup>165</sup>

Nevertheless, the Egyptians were badly hampered by inferior marksmanship and a pervasive reluctance to maneuver or counterattack the Israelis. Thus the 7th Armored Brigade simply had to weave and push its way through the Egyptian defensive positions to break through. Once the 7th Armored Brigade had outflanked or penetrated each defensive line, it was generally free of additional resistance from that position and could either roll up the line or move on to the next position. The Egyptians did a very poor job of maneuvering against the Israelis to prevent them from getting on their flanks and once into the rear of an Egyptian fortification, the Israelis wrought havoc because the Egyptian units generally responded either by continuing to fight from their existing positions--rather than regrouping to face the new direction of attack--or by panicking and abandoning their posts. Once the Israelis had penetrated their defensive lines and their unexpected maneuvers took them into unexpected routes, artillery fire virtually disappeared because the Egyptian batteries could not shift fire quickly or accurately enough to keep pace with the fast-moving Israelis. In tank-on-tank duels, the Israelis consistently outshot and outmaneuvered the Egyptians and

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<sup>163</sup> Dupuy, p. 246; Hammel, p. 170; O'Ballance, *The Third Arab-Israeli War*, p. 68.

<sup>164</sup> Dupuy, pp. 242-244; Hammel, pp. 160-161; Wald, pp. 82-83.

<sup>165</sup> Dupuy, pp. 249-251; Hammel, pp. 180-205; Herzog, *The Arab-Israeli Wars*, p. 157; Israel MoD, pp. 56-57; O'Ballance, *The Third Arab-Israeli War*, pp. 112-115; Young, p. 105.

prevailed in every armor engagement.<sup>166</sup>

By early afternoon, Tal's ugdah had pushed through the defenses around Rafah, seized the crucial road junction there and was driving westward toward al-'Arish. Once clear of the initial defensive positions and into the Egyptian operational depth, resistance abated dramatically and the Israeli forces became increasingly successful as their room for maneuver expanded. Egyptian forces at the Giradi pass holding the gateway to al-'Arish were easily overcome despite a superb natural defensive position and impressive field fortifications. At least part of this failure must be blamed on the Egyptian units at Rafah, who refused to admit that they were being quickly defeated and their lines penetrated, and instead reported that they had defeated the Israelis and were counterattacking. Consequently, the units at the Giradi pass miles behind Rafah were caught off-guard when Israeli armor came barreling down on them. Nevertheless, the Egyptians fought back ferociously and while several different Israeli armored forces were able to punch through the multi-layered defenses at the Giradi, after each attack, the Egyptians came back and remanned the defenses. Not until that night when the IDF brought up infantry to clear the Giradi positions were the Egyptians finally driven out altogether. Nevertheless, the Egyptians at the Giradi had failed to stop the Israelis, and al-'Arish later fell to the first IDF tanks that had broken through the pass that afternoon.<sup>167</sup>

#### *The Battles of Umm Qatef and Abu Ageilah*

The defense of Abu Ageilah and its various outlying defensive positions was given to the Egyptian 2nd Infantry Division, probably the best infantry division in the army, bolstered by an independent armored brigade. In 1967, the defenses there were even more formidable than they had been in 1956. Thick minefields protected the approaches to Umm Qatef and multiple, contiguous trench lines stretched from the Gebel Dalfa in the south to the (supposedly impassable) sand dunes to the north. However, the Israelis had also been paying attention to Abu Ageilah. After their inability to reduce the position in the first Sinai war, the Israelis made the Abu Ageilah defensive positions a topic of constant scrutiny and in the years before the Six-Day war, Israeli forces gamed and practiced taking them countless times. Sharon's ugdah basically put into practice what had been learned in these exercises.<sup>168</sup>

In twelve hours the Israelis captured the entire Egyptian defensive system at Abu Ageilah and effectively destroyed the 2nd Infantry Division as a combat unit. In his memoirs, Sharon claims to have structured his plan at Abu Ageilah/Umm Qatef specifically to take advantage of recurrent Arab weaknesses in tactical initiative, improvisation, and adaptation he had observed in his twenty years fighting Arab armies.<sup>169</sup> The Egyptian 2nd Infantry Division had two of its infantry brigades and all of its armor support massed to defend the main Abu Ageilah/Umm Qatef positions while its third infantry brigade was deployed farther southeast at Qusaymah. It was considered common wisdom among the Egyptians and Israelis that Qusaymah had to be taken before Umm Qatef could be attacked lest the force at Qusaymah hit the attacker in his left flank. Sharon virtually ignored the brigade at Qusaymah, leaving only a small reconnaissance force to watch it. Before assaulting the main positions at Umm Qatef, Sharon sent an armored battalion task force commanded by Lt. Colonel Natke Nir through the supposedly impassable dunes north of Umm Qatef to loop around far to the rear of the Egyptian defense lines, as Adan's battalion

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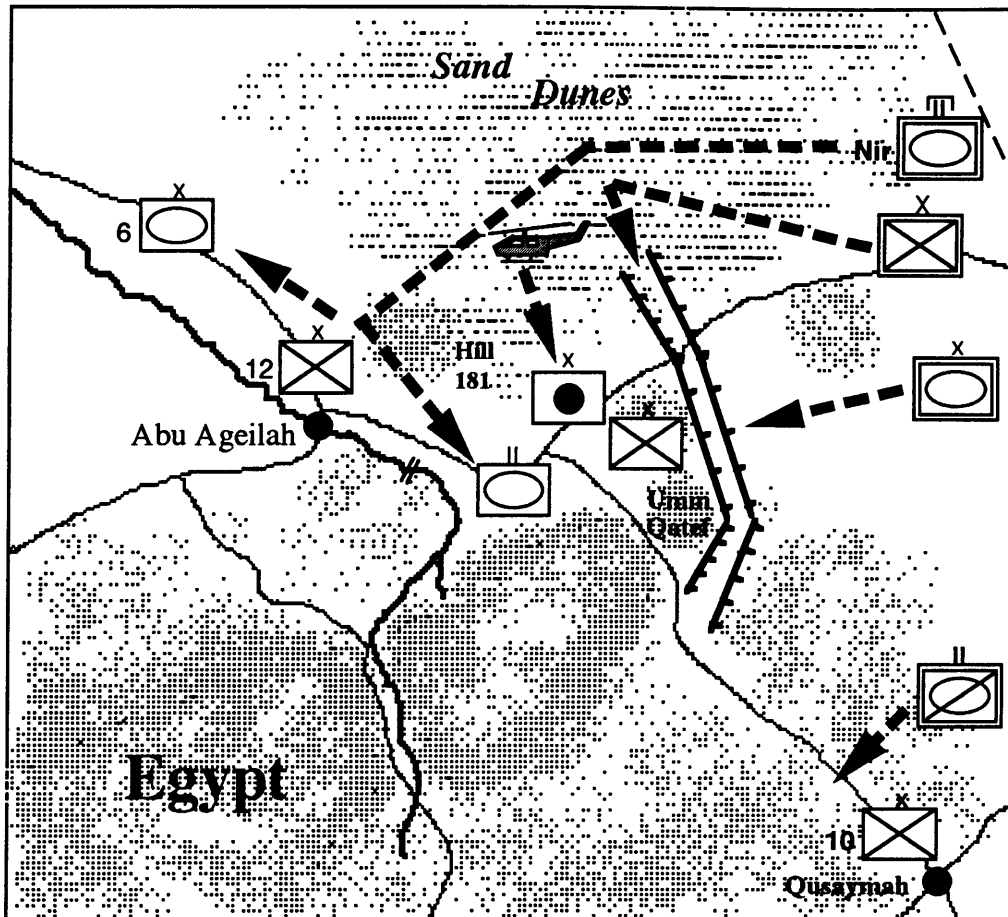
<sup>166</sup> Dupuy, pp. 249-255; Hammel, pp. 180-211; O'Ballance, *The Third Arab-Israeli War*, pp. 112-127; Young, p. 106.

<sup>167</sup> Dupuy, pp. 252-253; Hammel, pp. 205-215, Herzog, *The Arab-Israeli Wars*, p. 158; Israel MoD, p. 58.

<sup>168</sup> Dupuy, pp. 257-258; Gawrych, *Key to the Sinai*, pp. 72-74, 81-98; Hammel, pp. 228-231; Herzog, *The Arab-Israeli Wars*, pp. 158-159; Sharon, pp. 188-189.

<sup>169</sup> Sharon, pp. 95-96, 119, 189-191.

## The Battle of Abu Ageilah, June 1967



----- - Egyptian fortified lines

←----- - Israeli attacks

□ - Egyptian units

□ - Israeli units

had done from the south in 1956. Sharon also landed a battalion of paratroopers by helicopters in the dunes north of the Egyptian artillery park several kilometers behind the forward trench lines. At 2230 hours, Sharon began the attack with an artillery barrage from 96 guns (the largest artillery force Israel had ever assembled for an operation). While the artillery and a battalion of tanks pounded the Egyptians pinned in their trenches, Sharon's infantry brigade moved north into the dunes, swung around the northern flanks of the Egyptian trenches, and attacked down the trench lines. Simultaneously, the paratroopers lurking in the dunes attacked into the Egyptians' rear, getting in among the artillery batteries and preventing them from supporting the infantry. Finally, Nir's armored battalion which had also pushed through the sand dunes into the Egyptian rear charged back through the Abu Ageilah crossroads and attacked a reinforced Egyptian armored battalion behind the Umm Qatef positions that was intended to serve as the immediate reserve for the Umm Qatef defenses.<sup>170</sup>

The Egyptians were completely surprised by the direction of Sharon's attacks and while most tried to fight back, their resistance was very ineffective. In the trenches, the Egyptian infantry fought hard until they were cleared out of every position, but they failed to reorient themselves as units to face northward to block the Israeli advance and instead simply stayed in their positions, and waited for the Israelis to come get them. Although it was dangerous work to clear each firing position and trench, the Egyptians' failure to form a new defense line or to counterattack northward to try to halt the Israelis doomed their resistance to futility. By sitting in their positions they killed some Israeli soldiers but they were not going to prevent the Israelis from clearing the entire trench. A greater failure still was the passivity of the Egyptian armor sitting behind the Umm Qatef trenches, which did not counterattack the Israeli infantry as they flanked the trenchlines. Instead, the Egyptian tanks sat passively until they were eventually hit by Nir's armor from behind. Likewise, the main Egyptian armored reserve, deployed well-behind the Abu Ageilah crossroads, sat motionless throughout the battle. They failed to reinforce hill 161, an Egyptian position attacked by Nir's armored battalion as it moved to outflank the entire Abu Ageilah defensive system, or to block or counterattack Nir's force once it had turned the left flank of the Egyptian defenses and was threatening to unhinge the entire defensive system. The Egyptian tanks even failed to reinforce or counterattack the positions at Abu Ageilah/Umm Qatef after the main Israeli assault began.<sup>171</sup>

In combat with the Israeli armor, the tanks of the reinforced Egyptian armored battalion behind Umm Qatef often sat motionless, turning to fire at the Israelis, but rarely maneuvering for a better position. While the Egyptians kept firing back, there was no effort to form up either for a more coordinated defensive effort or a counterattack, and after losing over half their strength in the battle, the Egyptian armor bolted. A few groups of Egyptian infantrymen with antitank weapons eventually joined the tank battle and did some damage to the Israelis, but only when the fight was virtually over. Thus the Israelis were able to bring up mechanized infantry to deal with the antitank teams without really hindering the defeat of the Egyptian tanks by their own armor. Finally, as Sharon had expected, the Egyptian brigade at Qusaymah sat motionless throughout the fight although they were within earshot of the battle to the north. They did not try to reinforce the Abu Ageilah position, counterattack into the left flank of the Israeli assault, or even provide artillery support.<sup>172</sup>

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<sup>170</sup> Dupuy, pp. 258-261; A. Harding Ganz, Abu-Ageilah--Two Battles," *Armor*, July-Aug 1974, p. 21; Gawrych, *Key to the Sinai*, pp. 103-117; Hammel, pp. 232-241; Herzog, *The Arab-Israeli Wars*, p. 159; O'Ballance, *The Third Arab-Israeli War*, pp. 132-134; Sharon, pp. 191-194.

<sup>171</sup> See Gawrych, *Key to the Sinai*, pp. 104-117.

<sup>172</sup> Dupuy, pp. 258-261; A. Harding Ganz, Abu-Ageilah--Two Battles," *Armor*, July-Aug 1974, p. 21; Gawrych, *Key to the Sinai*, pp. 103-117; Hammel, pp. 232-241; Herzog, *The Arab-Israeli Wars*, p. 159; O'Ballance, *The Third Arab-Israeli War*, pp. 132-134; Sharon, pp. 191-194.

## Egyptian Confusion and Reaction

From the moment of the first Israeli airstrikes the fog of war had descended rather heavily on the Egyptian command network. The principal problem was that once the Israelis began inflicting horrendous defeats on the various elements of the Egyptian armed forces, Egyptian personnel at all levels reacted by dissembling, obfuscating, exaggerating and outright lying to cover their mistakes. Ze'ev Schiff notes that, "From the outset, fictitious reporting, the traditional bugaboo of Arab armies, was rampant. . . . Commanders in the field fabricated successes or, in order to justify failure, exaggerated the size of Israeli forces."<sup>173</sup> First, Egyptian Air Force personnel and Field Marshal Amer refused to tell anyone that the Israelis had destroyed the entire Air Force during the morning of 5 June. Instead, they told Nasser, the General Staff, and the Egyptian ground commanders in Sinai that they had destroyed most of the Israeli aircraft and were in the process of reducing Israeli air bases to rubble. Not until the afternoon of 5 June would Amer and the Air Force admit the extent of the defeat to Nasser.<sup>174</sup> The army in Sinai, including General Murtagi, were not told of the true results of the airstrikes until 1200 hours on 6 June--28 hours after the first airstrikes. Meanwhile, Egyptian tactical commanders in the Sinai initially refused to report that they were losing badly to Israeli ground forces, and instead reported that they were winning. Later in the day, however, when many frontline positions had been overrun, the reports changed 180 degrees, and dispatches began to pour in of catastrophic defeats at the hands of enormous Israeli forces<sup>175</sup>

These wild and contradictory reports from the top and bottom of the hierarchy produced chaos in the Egyptian chain of command. Based on the initial reports of Egyptian success, Nasser and the Egyptian General Staff told King Hussein and the Jordanian General Staff that the Egyptian Air Force had destroyed the IAF and the Egyptian Army was already driving into southern Israel. They asked Jordan to launch an attack into the Negev to link up with the (fictitious) Egyptian attack. Jordan agreed, began moving its only armored reserves to the Negev, and began to bombard Israeli military installations. Only late in the day, after the IAF began to pound Jordan's airfields and armored columns did Amman realize that Cairo had been lying.<sup>176</sup> Amer himself was despondent for most of the morning, but in the afternoon he snapped back and began issuing orders feverishly,, bypassing both Murtagi and Muhsin and speaking directly to division and brigade commanders.<sup>177</sup> In addition, the orders Amer issued often were contradictory or misguided because he was indecisive and had to rely on inaccurate and contradictory

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<sup>173</sup> Schiff, pp. 135-136.

<sup>174</sup> Gamasy, p. 57; Hammel, p. 244.

<sup>175</sup> J. Bowyer Bell, "National Character and Military Strategy: The Egyptian Experience, October, 1973," *Parameters*, Spring 1975, p. 12; Cordesman, *The Arab-Israeli Military Balance*, p. 25; El Edroos, pp. 373-411; Gawrych, "The Egyptian High Command in the 1973 War," pp. 535-559; Hammel, p. 147; O'Ballance, *The Third Arab-Israeli War*, pp. 68, 142; Edgar O'Ballance, *No Victor, No Vanquished: The Yom Kippur War*, (London: Barrie and Jenkins, 1979), p. 236; Shimon Shamir, "Arab Military Lessons from the October War," in Louis Williams ed., *International Symposium on the Military Aspects of the Israeli-Arab Conflict*, (Tel Aviv: University Publishing Projects, 1975), pp. 172-173.

<sup>176</sup> King Hussein of Jordan, *My War with Israel*, as told to Vick Vance and Piere Lauer, (NY: William Morrow, 1965), p. 60; Samir Mutawi, *Jordan in the 1967 War*, (Cambridge: Cambridge University Press, 1987), p. 96. These Jordanian actions provoked Israel to destroy the Jordanian Air Force and launch a full-scale invasion of the West Bank that rapidly overran the forward Jordanian infantry brigades. When IAF aircraft joined the battle in large numbers, it became apparent to the Jordanian high command that the Egyptian story was nonsense, and by the end of the second day Jordan had opted to retreat from the West Bank. See chapter 8 below for additional information.

<sup>177</sup> Amer has widely been reported to have been an alcoholic, a drug addict, or both. Many accounts suggest he may have been drunk, stoned, or both during the morning of 5 June. See, Dupuy, p. 267, fn. 1; Hammel, p. 244; Herzog, *The Arab-Israeli Wars*, p. 160.

information. For most of the day on 5 June, many of the Egyptian units in Sinai remained motionless as a result of the confusion in the General Staff and the unwillingness of Egyptian field commanders to act on their own initiative.<sup>178</sup>

One reasonably cogent order Amer issued was to have two brigades of the 4th Armored Division move to B'ir Lafhan and counterattack into the left flank of Tal's ugdah as it pushed through Rafah toward al-'Arish. The division's mechanized brigade and one of its armored brigades (both equipped with T-55s) moved out that afternoon and by nightfall they had arrived at B'ir Lafhan, where they unexpectedly encountered a battalion of Israeli Centurions from the lead armored brigade of Yoffe's ugdah. The Egyptians were surprised to find Israeli armor on the wrong side of the supposedly impassable sand dunes south of al-'Arish. After an initial clash in which the Egyptians lost nine tanks while only destroying one Israeli tank, the Egyptians pulled back to await daylight--despite the fact that Egyptian night-vision equipment was far superior to that of the Israelis. During the night the Egyptians tried harassing the IDF positions with artillery fire, but their shelling was very inaccurate. The next morning, the Egyptians realized that they were facing only a small Israeli force and tried an all-out attack to destroy the Israelis and push on to al-'Arish. The Egyptians quickly launched a frontal assault, but the Israelis had not been idle during the night. When the Egyptian assault began, it was greeted by Israeli airstrikes. Israeli tank gunners relied on long-range marksmanship to batter the Egyptian formations and then maneuvered from position to position, getting flank shots on Egyptian armor and then darting back behind cover. Finally, Col. Bren Adan arrived with another tank battalion, caught the Egyptians in the flank and drove them back. In this manner, the Israelis badly bloodied the much larger Egyptian force, destroying at least 30 Egyptian tanks--and possibly three times that number--plus large numbers of other armored vehicles without losing any of their own.<sup>179</sup> IAF aircraft continued to harass the fleeing Egyptians.<sup>180</sup>

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<sup>178</sup> Dupuy, pp. 265-267; Gawrych, "The Egyptian High Command in the 1973 War," p. 540; Hammel, pp. 243-245; Herzog, *The Arab-Israeli Wars*, p. 160;

<sup>179</sup> There is some confusion as to how many tanks the 4th Armored Division lost in this battle, although there is a consensus that it suffered heavily. For instance, Hammel notes only that one of the two Israeli armored battalions destroyed 28 T-55s on its own, and that "many others" were destroyed by airstrikes. Presumably, the other tank battalion also destroyed a fair number of Egyptian armored vehicles. Hammel, p. 226.

<sup>180</sup> Randolph S. Churchill and Winston S. Churchill, *The Six-Day War*, (London: Heinemann, 1967), p. 112; Dupuy, pp. 263-264; Hammel, pp. 223-226; Israel MoD, pp. 67-68; O'Ballance, *The Third Arab-Israeli War*, pp. 135-136; Safran, *From War to War*, pp. 342, 346; Wald, p. 84. Most Egyptian sources claim that the 4th Armored Division was destroyed not in ground combat, but by IAF air attacks as it first moved out of B'ir Gifgafah. I believe these claims to be specious. First, the Israeli accounts of the engagement at B'ir Lafhan are extremely detailed and there is wide agreement among the participating Israeli officers on the course of the battle. The Israeli pilots who participated also largely concur in the course of the battle, although there are discrepancies in the details, mostly related to which service was responsible for destroying the lion's share of the Egyptian armor. This broad concurrence alone makes it difficult to dispute that some large Egyptian armored force hit the Israelis at B'ir Lafhan. Given the status and deployment of the other Egyptian heavy divisions, and the constant Israeli air activity over Sinai, it is very difficult to see how this large armored force could have come from any unit other than 4th Armored Division. For example, it is well known that Shazli's armored force did not take part in the fighting, and we can be certain that if it had, Shazli would not have failed to mention (and aggrandize) this action in his memoirs. Gamasy even admits that 4th Armored Division was ordered to counterattack the Israelis on 6 June, although he claims that it was ordered to Abu Ageilah and then ordered back after the first Israeli airstrikes. [Gamasy, p. 62] Another point bearing on this dispute is the fact that there is no record of IAF airstrikes devastating a large Egyptian armored force near B'ir Gifgafah early on 6 June, only of a coordinated CAS campaign against the large armored force near B'ir Lafhan. The Egyptian accounts also are extremely vague and impressionistic: while they emphatically assert that 4th Armored Division never was in contact with Israeli armor, they provide no details concerning 4th Armored Division's actual operations, nor do they explain what force it was that the Israelis were fighting around B'ir Lafhan if it wasn't 4th Armored Division. Most Western experts concur with the Israeli version of the events surrounding the 4th Armored Division. The

## The Egyptian Retreat

The defeat of the 4th Armored Division at B'ir Lafhan may have been the last straw for Amer. In the afternoon of 6 June, a little more than a day and a half after the first Israeli airstrikes, Amer ordered a general retreat from Sinai. The orders went out that all Egyptian units should fall back across the canal as quickly as possible. There were no instructions regarding a phased withdrawal or a fighting retreat, units were simply to get out as fast as they could.<sup>181</sup> Later that evening, several senior General Staff officers apparently persuaded Amer that the situation was not irretrievable and convinced him to rescind or amend the original withdrawal order, but by that time the damage was done and the retreat was irreversible.<sup>182</sup>

The Egyptian withdrawal quickly turned into a rout. The first problem the Egyptians encountered was that when many senior field commanders received the order to retreat they jumped in their staff cars and fled to Cairo, frequently without issuing any orders to their subordinates as to how to conduct the withdrawal. In most of these cases, lower-ranking officers did not step forward to fill the leadership void with the result that some units began to fall apart as junior officers were forced to make decisions on their own about how to get their men out of Sinai. In certain cases the junior officers also simply decided that it was "every man for himself" and set out on their own. In this chaos, unit cohesion varied widely. In some cases, large formations stuck together despite the desertion of their senior officers, while in others, entire divisions virtually disintegrated with men abandoning their heavy equipment and setting out across the desert on their own or in tiny groups to try to make it back to Suez.<sup>183</sup>

Only a few formations tried to stand and fight to cover the retreat, or even to deploy rearguards while the rest of their unit retreated. Without direction from the GHQ, most Egyptian forces proved incapable of any action except flight. For example, General Shazli, commanding an armored division task force southwest of Abu Ageilah was among the senior officers who fled immediately upon hearing of the retreat. His force was large, intact, and at that point was the most powerful Egyptian concentration in Sinai. However, rather than try to conduct a fighting withdrawal to try to get their armored vehicles and other weaponry out of the Sinai, the unit's junior officers simply set off for the canal without any planning, coordination or rearguards. Many of Shazli's subordinates abandoned their equipment altogether and tried to make it back to the canal on foot.<sup>184</sup> Some Egyptian units buried their heavy equipment in place, including tanks, APCs, and artillery, and set off across the desert either in trucks or on foot.<sup>185</sup>

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only Western author I have encountered who supports the Egyptian version is George Gawrych. Gawrych favors Egyptian accounts over Israeli in general, whereas I have generally found that the Israeli accounts--especially of the Six-Day War--have proven the more accurate when the two were in conflict and an independent, objective source was available to resolve the dispute. Finally, I note that even the most revisionist Israeli military experts such Emmanuel Wald--who go to great pains to reveal any inaccuracies in Israeli military accounts, and who do a far more devastating job exploding the myths of Israeli invincibility than the Arabs ever could--also concur that two brigades of 4th Armored Division were essentially destroyed in a large tank battle at B'ir Lafhan. My sense is that if after all their digging, the Israeli revisionists believe that 4th Armored Division was destroyed in combat at B'ir Lafhan, then there is a very high probability that this was the case.

<sup>181</sup> Dupuy, pp. 265-267; Gamasy, pp. 66-69; Gawrych, "The Egyptian Military Defeat of 1967," p. 298; Hammel, pp. 243-244.

<sup>182</sup> Dupuy, p. 268; Hammel, p. 246.

<sup>183</sup> Dupuy, p. 268; Gamasy, pp. 64-65; Hammel, p. 246; Herzog, *The Arab-Israeli Wars*, pp. 160-165; O'Ballance, *The Third Arab-Israeli War*, pp. 142-149; Wald, p. 85; Young, p. 112.

<sup>184</sup> Dupuy, p. 273.

<sup>185</sup> Dupuy, pp. 263-264; Hammel, pp. 260-279; Herzog, *The Arab-Israeli Wars*, p. 160-164; O'Ballance, *The Third Arab-Israeli War*, pp. 149-162; Safran, *From War to War*, p. 342; Sharon, pp. 198-203; Wald, p. 84.

After Amer had come back to his senses, and when it became clear that the Egyptian units in Sinai were simply retreating pell-mell, the General Staff began trying to organize rear guards to slow the Israelis while the rest of the army ran. Elements of the 3rd Infantry Division were ordered to remain in place in their defensive positions at Jebel Libni where they put up a stiff fight before they were outflanked and obliterated by Israeli armor.<sup>186</sup> Another brigade of the same division was ordered to make a stand farther west at B'ir Hammah, but in this case the Egyptians put up only perfunctory resistance before fleeing.<sup>187</sup> The remnants of 4th Armored Division were ordered to stand and fight at B'ir Gifgafah on 7 June and then retreat back across the canal, an operation the unit executed fairly well (although in tactical engagements with the Israelis its troops were consistently beaten badly) and so was able to extract almost a brigade's worth of equipment intact.<sup>188</sup> The General Staff then ordered a reserve armored brigade to move east from Ismailia to reinforce the 4th Armored Division at B'ir Gifgafah and cover the withdrawal. The GHQ apparently failed to calculate that by the time this force got to B'ir Gifgafah, 4th Armored Division would already have fallen back from those positions. Although the reinforcing brigade passed the retreating elements of 4th Armored Division as it drove eastward toward B'ir Gifgafah, without specific orders from the General Staff to turn around, the brigade commander kept heading east. When the brigade arrived at B'ir Gifgafah, the Israelis had already secured the former Egyptian camps and in a short, sharp battle the Israelis mauled the Egyptian armored brigade.<sup>189</sup> Later, the Egyptians conducted several smaller counterattacks near Qantarah and the Giddi pass by units held in GHQ reserve at the canal, but these were easily dispatched by Israeli armor and airstrikes.<sup>190</sup>

Compounding Egyptian problems, the Israelis were now in their element. Having broken through the initial fortified lines of the Egyptian army and penetrated into its operational depth, Israeli armor now had room to run and maneuver and cause havoc. The Israelis quickly developed an exploitation strategy by which they sent armored columns deep into central Sinai to cut the Mitla, Giddi and B'ir Gifgafah passes before most of the Egyptian army could pass through them. Although some units, like the remnants of the 4th Armored Division, were able to make good their escape because their divisional leadership remained behind to direct a fighting withdrawal, most did not. Most Egyptian units, including the large and intact formations of the 6th Mechanized Division and Shazli's armored force, were cut off by Israeli armor at the various passes and then destroyed by Israeli air and ground forces. In many cases even this was unnecessary as large numbers of Egyptians simply abandoned their vehicles and attempted to make it out by foot when they saw the passes were blocked. Although the Israelis spent several weeks rounding up the last of these men, few made it out of the desert and past the Israeli roadblocks alive.<sup>191</sup>

In some cases, the Egyptians tried to fight their way past what were initially very small Israeli blocking forces at the various passes. For example, Brigadier General Bren Adan arrived at the Mitla pass with a *platoon* of tanks after a cross-country dash, and was left for much of the day on 7 June to contend with most of three Egyptian divisions trying to escape through the pass. However, the Egyptians fought extremely poorly. For the most part they didn't attack at all but just kept moving toward the pass or tried to drive the Israelis off with inaccurate tank fire. On the rare occasions when the Egyptians launched a determined attack, in every case it was a clumsy, slow-moving frontal assault that the Israelis had little trouble dispatching with a few quick maneuvers and deft long-range

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<sup>186</sup> Dupuy, p. 270; Hammel, pp. 260-261.

<sup>187</sup> Dupuy, p. 271.

<sup>188</sup> Gamasy, p. 70; Hammel, pp. 260-279, esp. pp. 264-265; Herzog, *The Arab-Israeli Wars*, pp. 160-165.

<sup>189</sup> Dupuy, pp. 274-275; Hammel, pp. 265-267; Herzog, *The Arab-Israeli Wars*, p. 164; Safran, p. 346.

<sup>190</sup> Herzog, *The Arab-Israeli Wars*, p. 162; O'Ballance, *The Third Arab-Israeli War*, p. 163.

<sup>191</sup> Dupuy, pp. 271-274, 277-278; Hammel, pp. 254-279; Herzog, *The Arab-Israeli Wars*, pp. 162-165; O'Ballance, *The Third Arab-Israeli War*, pp. 149-163; Sharon, pp. 201-203.



gunnery. Moreover, the Egyptian attacks were conducted only with armor--no effort was made to have infantry sneak up on what were frequently unsupported Israeli tanks and attack them with anti-tank weapons. Similarly, the Egyptians directed very little artillery fire against the Israeli blocking forces, and the few barrages they did conduct were inaccurate and caused little damage.<sup>192</sup> Nadav Safran wrote that:

The Egyptians did indeed fight with skill and courage from prepared positions in the first phase of the battle but once their fixed lines of defense were smashed, they were never able to fight again in any coordinated fashion, and occasional displays of courage by various units notwithstanding, the bulk of the Egyptian troops that had not been affected by the first phase were reduced to a fleeing rabble by the swift Israeli maneuvers.<sup>193</sup>

The Egyptian Army was all but obliterated during the Six-Day war. They suffered 10,000-15,000 casualties and had 5,500 men captured by the Israelis. The Egyptians left 600-700 tanks in Sinai, of which about two-thirds were destroyed in ground combat or by airstrikes. Nearly 500 artillery pieces were captured, as well as 10,000 other vehicles. Nasser even admitted several months later that the Egyptian armed forces had lost 80 percent of their ground equipment in the war.<sup>194</sup> Against this the Israelis took about 1,400 casualties and lost 61 tanks.<sup>195</sup>

### **The War in the Air**

The Israeli airstrikes on the morning of 5 June effectively removed the Egyptian Air Force as a potential influence on the course of the war. Thereafter, the Egyptians had few operational aircraft and mustered very few sorties. As a result, the EAF had little impact on any aspect of the fighting.

Even before the decisive Israeli airstrikes, however, the Egyptian Air Force appeared unlikely to have contributed significantly to Cairo's war effort. Egypt continued to experience serious problems assimilating Soviet weaponry, and particularly the somewhat more complicated Air Force equipment. Egyptian Air Force personnel had great difficulty learning to fly and maintain even the relatively simple Soviet MiG-21 fighter. On the first day of the war, 20% of the Egyptian Air Force was non-operational because their pilots and flight crews had still not sufficiently mastered their aircraft. Their ground crews took excessively long times to repair and prepare aircraft for combat operations.<sup>196</sup> According to the Israelis, the MiG-21 was a very capable aircraft for its time and in the hands of a good pilot could be very dangerous, but most Egyptian pilots could not approach the full capabilities of their aircraft, were slow to react, unimaginative, and inflexible in combat.<sup>197</sup>

As a result, Israeli fighters completely dominated the EAF in dogfights. The IAF shot down 42 Egyptian aircraft in air-to-air combat during the war, while losing only 3 of their own to the Egyptians.<sup>198</sup> On the first day of the war, the Egyptians lost 19 planes to

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<sup>192</sup> Dupuy, pp. 271-274, 277-278; Hammel, pp. 254-279, esp. p. 258; O'Ballance, *The Third Arab-Israeli War*, pp. 149-163

<sup>193</sup> Safran, *From War to War*, p. 351.

<sup>194</sup> Dupuy, p. 279; Hammel, p. 279; Herzog, *The Arab-Israeli Wars*, p. 165.

<sup>195</sup> Dupuy, p. 279. Several hundred other tanks suffered battle damage but were repaired, usually within a day or two. The 61 tanks the Israelis considered destroyed thus represent catastrophic losses that could not be repaired.

<sup>196</sup> Dupuy, p. 246; O'Ballance, *The Third Arab-Israeli War*, p. 60.

<sup>197</sup> Cohen, pp. 201-202, 206, 215-217, 242-244; Yonay, pp. 248-249; Young, p. 90.

<sup>198</sup> Cohen, pp. 243, 253; Luttwak and Horowitz, p. 174; Safran, *From War to War*, p. 328; Yonay, p.

Israeli fighters. On the second day they lost 14 planes in dogfights, and on the third day another 9 of their planes fell in aerial combat.<sup>199</sup> Nevertheless, the Egyptians did not shy away from the fight. Despite the devastation they suffered in the first hours of the war, throughout the next four days, albeit in ever dwindling numbers, Egyptian fighters came up to do battle with the Israeli interceptors and, occasionally, to attack Israeli ground formations in Sinai. <sup>200</sup>

### **General Observations on Egyptian Military Effectiveness in the Six-Day War**

Although the Six Day War was a far greater humiliation than the 1956 Sinai-Suez war, Egyptian combat performance in 1967 was not that much worse than in 1956. Tactical performance was equally poor. The performance of Egyptian strategic leadership was worse, but probably not significantly so. Although the balance of forces favored Egypt in 1967 to a much greater extent than in 1956, the quality of Israeli equipment was much closer to the quality of Egyptian weaponry in 1967 than had been the case in 1956. The major difference between the two wars, in fact, was the effectiveness of the Israelis. In 1956, Israeli military performance was actually fairly mediocre and, in particular, Israel's strategic direction was poor. The plan for the Israeli invasion in 1956 was badly constrained by political considerations and was based on a fundamental misunderstanding of Egyptian military effectiveness. By 1967, Israeli tactical proficiency completely outclassed that of the Egyptian armed forces. Israel's generals also devised a much better plan that played to Israeli strengths and Egyptian weaknesses. Moreover, as the campaign unfolded, Israel's generals continued to push the course of operations farther and farther into those areas of military operations at which the Israelis excelled and the Egyptians could not compete.

#### *Tactical Performance*

Egyptian tactical performance manifested all of the same patterns of behavior observed in its previous campaigns. On the positive side, Egyptian forces once again demonstrated an impressive ability to conduct static defensive operations. The toughest part of every Israeli attack was breaking through the fixed defenses, as the Egyptians fought well from their fortified positions, counterattacked with determination, and clung to their defenses tenaciously. Egyptian gunnery, including artillery fire was very accurate as long as the Israelis conducted attacks along avenues of approach that the Egyptians had recognized and so had sited interlocking fire positions and pre-registered artillery fire zones to cover them.

Egyptian soldiers also were remarkably brave. Although there were instances of units fleeing without a fight during the opening stages of the war, the Egyptians generally fought very hard when defending their fortified defense lines. At the Giradi pass, Rafah, Abu Ageilah, and Umm Qatef, Egyptian soldiers continued fighting long after the Israelis had broken through and their positions were untenable. In each of these fights, the Israelis generally had to reduce each strongpoint with infantry because long after the battle had been decided the Egyptians kept fighting. This quality was recognized by virtually every Israeli field commander who faced them in 1967. After the war, Moshe Dayan commented that, "As for the fighting standard of the Arab soldiers, I can sum it up in one sentence: they did not run away."<sup>201</sup>

The cohesion of Egyptian units in Sinai during the Six-Day war was very uneven.

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<sup>199</sup> Israeli MoD, pp. 35-37.

<sup>200</sup> Cohen, p. 242.

<sup>201</sup> G. P. Armstrong, "Egypt," in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, CT: Greenwood Press, 1983), p. 159.

As long as they were defending their fixed defensive positions, most formations clung together superbly. Once again, at the Giradi pass, Abu Ageilah, Rafah, Umm Qatef, and Jebel Libni, Egyptian units fought together until they were physically overpowered by the Israelis. Overall, there are few instances of units disintegrating during the first phase of the war. Conversely, unit cohesion broke down across the board during the retreat beginning the afternoon of 6 June. While the desertion of many senior officers was an important element of that breakdown, it cannot be said to have been decisive. In some cases, Egyptian units stuck together even after their commanders had fled, while in other instances they disintegrated despite the fact that their senior leadership did not flee.<sup>202</sup>

Likewise, the chaos in the Egyptian command structure also had an impact on Egyptian unit cohesion, but it too was not decisive. If the problem had been the complete breakdown in the Egyptian command and control system, this disintegration should have occurred when the chaos was greatest, on 6 June immediately after the general retreat order was given because this was a clear indication that the senior leadership was in a state of panic. While several units did fall apart the moment they received the retreat order, the vast majority hung together and only splintered later, during the retreat. Finally, more competent Egyptian units did not necessarily display better unit cohesion nor did less competent units necessarily display worse unit cohesion. For example, the Egyptian 7th infantry division--a very mediocre unit--fought just as hard as the 2nd Infantry Division--a very competent unit by Egyptian standards. Likewise, there was no particular congruence in behavior among the best units in the Egyptian Army: the 4th Armored Division conducted a very professional fighting withdrawal, while the 6th Mechanized Division bolted *en masse* after the initial retreat order and then fell apart during the withdrawal.

These patterns--or lack thereof--strongly suggest that it was the process of the retreat itself, or else the Israeli actions during the retreat, that keyed the general breakdown in unit cohesion during the withdrawal. Many Egyptian units did not fall apart until they reached the various passes only to find them blocked by Israeli armor. Even in these cases, many formations retained enough unit integrity to at least try to break through the Israeli blocking positions, and only when it became clear that they could not do so and thus were trapped did unit cohesion finally collapse. In other instances, Egyptian units broke apart during the retreat itself. In these cases, their leadership was largely forced to act on its own without much, or sometimes any, guidance from higher command authorities. These ad hoc operations were stilted, simplistic, and poorly planned and prepared. For the most part, the commanders simply ordered their men to head for the passes with or without their heavy equipment. Few preparations were made to scout the route, determine the position and direction of Israeli forces, organize the formation for any contingencies along the way, or outline alternative courses of action in case the initial plan was found to be inadequate.

The haphazard conduct of the withdrawal by the Egyptian field officers who had remained in Sinai seems to have had a profound impact on unit cohesion during the retreat. The impact of this problem can be seen in a comparison of the 4th Armored Division's withdrawal with that of the 125th Mechanized Brigade of the 6th Mechanized Division. In both cases, the senior officers remained with the unit--at least initially. However, the 4th Armored Division, which remained in close contact with the General Staff, conducted a very disciplined and well-prepared fighting withdrawal, whereas the 125th Mechanized Brigade, which was left to its own devices, buried its equipment and simply set out across the desert to find the passes. When it became clear that this plan was not going to work, the brigade leadership abandoned their troops and ordered their men to keep heading west. As their plight became increasingly desperate, the brigade fell apart with men and officers scattering in all directions across the desert.<sup>203</sup>

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<sup>202</sup> See for example, Hammel p. 198.

<sup>203</sup> On the story of the 125th Mechanized Brigade, see for example Dupuy, pp. 275-276; Hammel, pp. 268-269.

The difficulties the Egyptians experienced in conducting an unplanned retreat without the guidance of the senior military leadership fits with many of the other severe problems the Egyptians experienced at tactical levels. For the most part, Egyptian forces were painfully slow to react to Israeli moves and were extremely inflexible in their actions. They rarely attempted to maneuver against the Israelis and reacted poorly to Israeli maneuvers. Although they conducted very determined counterattacks, these invariably were simple frontal assaults, and if the sudden shock wasn't enough to throw the Israelis back, the counterattack would fail--and the position would fall. The few armored counterattacks they conducted--basically at B'ir Lafhan, B'ir Gifgafah, and the Mitla pass--were ponderous frontal assaults that relied largely on firepower rather than maneuver. The Israelis defeated them and inflicted heavy losses on the attacking forces through superior marksmanship and constant maneuver both as units and as individual tanks. In many instances, Egyptian forces did not counterattack at all, but simply sat passively in their defensive positions, firing but not moving, long after their lines had been breached. The inaction of the Egyptian armored reserves at Abu Ageilah/Umm Qatef in particular stand out in this regard.

The source of these problems lay with Egypt's junior officers, the commanders from brigade level down. Most of these officers displayed little initiative, imagination, or ability to react to unforeseen Israeli actions quickly and efficiently without explicit instructions from higher authorities.<sup>204</sup> General Sharon commented after the war that

I think the Egyptian soldiers are very good. They are simple and ignorant but they are strong and they are disciplined. They are good gunners, good diggers, and good shooters--but their officers are shit, they can fight only according to what they planned before. Once we had broken through, except for the minefield between Bir Hassneh and Nakhl, which was probably there before the war, the Egyptian officers placed no mines and laid no ambushes to block our line of advance. But some of the soldiers, particularly at the Mitla where we had blocked their line of retreat, fought to the death in an attempt to break westwards to the canal.<sup>205</sup>

These failings reduced the impact of good moves by Egypt's senior leadership and exacerbated their mistakes. For example, as noted above, Egyptian units were reshuffled several times during May 1967 and ultimately some units had only been in the positions from which they eventually fought for only a week or two. This was clearly a mistake on the part of the political leadership, and to a lesser extent of the senior military commanders. However, Egyptian field commanders compounded this problem by failing to have their units dig-in when they moved to a new position unless specifically ordered to do so by higher authorities. Thus in many cases, companies, battalions and brigades did not even take advantage of the limited time they had to prepare their defensive positions because their commanders were unwilling to take even the most obvious precautions on their own initiative.<sup>206</sup>

Another problem for Cairo's forces was that the Egyptians were largely unable to take advantage of the capabilities of the weaponry at their disposal. For instance, after the war, the Israelis found that only about 5 percent of all the mines the Egyptians had laid in

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<sup>204</sup> Of course there were exceptions to this rule. For example, after the commanding general of 3rd Infantry Division--General Nasr--deserted on 6 June, one of his subordinates apparently stepped forward and took command and implemented the General Staff's orders to deploy covering forces at Jebel Libni and B'ir Hammah.

<sup>205</sup> Quoted in Young, p. 112.

<sup>206</sup> Luttwak and Horowitz, p. 289.

the Sinai had been properly armed.<sup>207</sup> The Israelis were very impressed with the quality of Soviet armored vehicles and re-equipped several new brigades with the equipment they had captured--brigades that performed well in the October War, six years later.<sup>208</sup> In the words of Ze'ev Schiff, "For the Egyptians, the great quantity of modern equipment proved to be an impediment. They had a hard time extracting the full benefit the equipment offered, and in the end they were defeated by it."<sup>209</sup>

### *Strategic Performance*

Many authors, particularly Egyptian writers, have attempted to lay the blame for the 1967 debacle entirely on the shoulders of Marshal Amer and the political hacks he had appointed to many key command positions. While it is certainly true that Cairo badly bungled many aspects of the campaign, this claim has been exaggerated. First, not all of Egypt's strategic/operational level moves were disastrous, and some were quite creditable. Second, there is every reason to believe that given the rather severe tactical shortcomings of Egyptian forces detailed above, and the hyper-competence of Israeli forces at all levels, even highly competent Egyptian generals could not have salvaged victory from the Six-Day war.

Egypt's plan for the defense of Sinai wasn't that bad, all things considered. The Egyptians once again recognized the primary avenues of advance across the peninsula and built formidable defensive positions to block these routes. They attached armored brigades to their forward infantry divisions to serve as local counterattack forces, and deployed armored and mechanized divisions deeper along the main arteries as operational reserves to block or seal Israeli penetrations. They made three critical, but not unforgivable mistakes: they failed to properly assess the traversability of certain terrain, they assumed that the Israelis would employ the same strategy they used in 1956 (i.e. the main thrust would come along the southernmost al-Kuntillah/ath-Thamadah/an-Nakhl axis), and they fell for the Israeli deception scheme that was designed to reinforce this misperception.

Nevertheless, even had they not made these mistakes, it is a virtual certainty that they still would have lost simply because at the tactical level their forces were no match for the IDF. This point is clearly illustrated by the Israeli assault on Rafah, in which the IDF attacked into the heart of one of Egypt's strongest defensive positions yet the Israelis were able to break through quickly and their losses, while heavier than the Israelis were accustomed to bear, were not debilitating. Thus even had Egyptian defenses been extended to cover the sand dunes, there is every reason to believe the Israelis still would have broken through--and would have broken through relatively quickly and painlessly. Likewise, the major problem with assuming the main Israeli thrust would come in the al-Kuntillah area was that some Egyptian mechanized forces were deployed too far south to quickly react to the Israeli attacks in northern Sinai. However, even had Egyptian armored reserves been better deployed, there is no reason to believe that their counterattacks would have gone any better than the attack by the 4th Armored Division at B'ir Lafhan, in which two intact Egyptian heavy brigades were decisively defeated by two Israeli armored battalions backed up by moderate air support. This incident suggests that had Egyptian armored reserves been positioned farther north they likely would have been destroyed in counterattacks against the Israeli penetrations, rather than in the retreat to the canal as was actually the case. Either way, the outcome would likely have been the same.

The Egyptians contend that had they employed the mobile defense-in-depth strategy envisioned in the Qahir plan they would have done much better, but I find little reason to believe this. Indeed, if anything, I think the Egyptians would have done even worse had

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<sup>207</sup> Hammel, p. 256.

<sup>208</sup> See for example Avraham (Bren) Adan, *On the Banks of the Suez*, 1991 Edition, (Novato, CA: Presidio Press, 1991), pp. 228-229.

<sup>209</sup> Schiff, p. 134.

they tried to implement the Qahir plan. The Qahir plan called for only a light infantry screen in the forward fortifications while the bulk of the forces, and all of the large mechanized formations, were held back to conduct a massive counterattack against the main Israeli penetration when it was identified. The problem with this plan is that it would have demanded that the Egyptians fight and prevail in fluid, meeting engagements with Israeli armor in central Sinai. In the actual course of operations the Egyptians clearly demonstrated that this kind of warfare was their weakest suit. The fighting at B'ir Lafhan, the performance of Egypt's armored reserves at Abu Ageilah, the tank duels between the IDF and the 4th Armored Division as it retreated from B'ir Gifgafah, and the combat between Adan's tiny force and the elements of 6th Mechanized Division and Shazli's Armored Force at the Mitla pass all attest to this dramatic imbalance. Based on the actual performance of Egyptian forces during the Six-Day war there is no reason to believe that the Egyptians could have quickly developed an ad hoc plan to conduct a double-envelopment of a large Israeli armored force in central Sinai, executed such a maneuver quickly and efficiently, and then defeated the Israelis in tactical armored engagements when the plan was put into effect. This scenario would appear to have been the answer to Tel Aviv's prayers: a massive, swirling maneuver battle in central Sinai where the Israelis' overwhelming advantages in improvisation, flexibility, and armored combat would have allowed them to obliterate Egypt's armored forces.<sup>210</sup>

With the exception of the politically inconceivable option of simply fortifying and defending the line of the passes in western Sinai, the actual strategy Cairo employed may have been the best available to the Egyptians. By opting for a forward defense, Egypt was able to employ a static defense anchored on the formidable defenses in eastern Sinai. This allowed Egypt's infantry to do what they did best, namely defend in place. While Egypt's heavy reserves may not have been ideally deployed, their mission--counterattack or block any Israeli penetration of the forward defensive lines--probably was not only appropriate, but effectively all they were capable of. If the Egyptians had been better deployed and had covered the supposedly impassable gaps in their lines, they would still have lost to the Israelis because of the tactical imbalance, but they undoubtedly would have caused greater casualties to the IDF and perhaps held out for longer. Thus the Egyptians probably had the best strategy, they just didn't execute it very well.

For the most part, Egyptian senior level decision-making *during* the war was awful and was a constant detriment to the Egyptian cause. The biggest problem was Amer's intermittent inattention and micromanagement of operations as well as his constant flip-flops in thinking and contradictory orders. This behavior contributed to two major problems. First, it caused a paralysis at the operational level in Sinai. That is, with the exception of the order for 4th Armored Division to counterattack into the Tal ugdah's flank--probably given in one of Amer's few lucid moments--none of the Egyptian heavy divisions made any move in response to the Israeli attacks. (Although it is noteworthy that no one lower in the chain of command stepped in and took it upon himself to direct the defense of Sinai. In particular, Shazli's force had the mission of supporting Abu Ageilah, but without explicit orders from GHQ Shazli did not lift a finger to help the 2nd Infantry Division fighting for its life there.) The second problem caused by the chaos in the General Staff was that it unnerved many of the Sinai field commanders, and this demoralization probably trickled down to their subordinates to some extent. Although there is little hard evidence on this point, it seems likely that, as noted above, it contributed to the desertion of so many senior field commanders immediately after the announcement of the withdrawal. The impact of this problem appears to have been mostly concentrated at senior levels because most Egyptian junior officers remained with their units.<sup>211</sup>

Two other Egyptian command decisions require discussion: the decision to retreat

<sup>210</sup> For a concurring assessment of the Qahir plan, see Hammel, pp. 245-247.

<sup>211</sup> Dupuy, p. 268; Hammel, p. 246.

on 6 June and the issuing of a vague general retreat order rather than a phased, fighting withdrawal. As the Egyptians and their supporters consistently point out, Amer issued a retreat order while much of the Egyptian army was still intact, and after several Egyptian units had fought very hard at Abu Ageilah and Rafah. Similarly, it is also true that Amer's simple order to his troops to get out of Sinai as quickly as possible contributed to the rout, and in particular to the desertion by many senior Egyptian field commanders. However, the impact of these actions has been greatly exaggerated, and in particular, it is impossible to contend that these decisions were the *cause* of the Egyptian defeat in Sinai.

First, although it is true that the Egyptian Army was still mostly intact by the afternoon of 6 June, it is also true that the campaign had largely been decided by that point. With the two strongest Egyptian positions (Rafah and Abu Ageilah) in Israeli hands, Israeli armor driving deep into the operational depth of the Egyptian defensive system, and the most powerful Egyptian heavy division defeated easily and decisively at B'ir Lafhan, the corner had been turned. By that point, it was highly unlikely that the Egyptians could have mounted a major counterattack against the Israeli ugdot driving for the passes. Even if the Egyptians had been able to mount a coordinated counterattack by Shazli's Armored Force, 6th Mechanized Division, and the remnants of 4th Armored Division against one or more of the Israeli ugdot (an extremely unlikely prospect), the experience of the previous 36 hours indicated that this attack would almost certainly have been decisively defeated. Therefore, calling for a general withdrawal on the afternoon of 6 June was not necessarily a catastrophic decision.

On the other hand, the manner in which that withdrawal order was issued was clearly inexcusable. The absence of an integrated plan for the Egyptian retreat, coupled with the flight of so many senior field commanders, was disastrous. It left local Egyptian commanders to their own devices, and they mostly proved unequal to the task. In addition, the dearth of GHQ guidance meant that Egyptian units could not coordinate their actions beyond the tactical level (although they generally failed to coordinate even at this level). The result of all this was that the Egyptian Army simply surged back toward the passes in one great, unorganized mass. There were few rearguards deployed, no determination of intermediate fall-back positions where hasty defenses and covering positions could be established to deal with Israeli pursuit, and no prioritization among units for retreat order. A better organized retreat almost certainly would have succeeded in getting more Egyptian units safely out of Sinai.

Some authors have also pointed to the creation of Murtagi's Sinai front command as a major reason for the confusion in Egypt's high command, and therefore, a crucial element of Egypt's defeat during the 1967 war.<sup>212</sup> I can find little reason to believe that this had more than a very minor impact on Egyptian performance. According to Gamasy--who was Murtagi's chief of staff at that time--the Sinai front command was bypassed completely throughout the war. All of the field commanders continued to report to Muhsin, and Muhsin reported directly to Amer. In turn, Amer issued orders directly to Muhsin. Murtagi's command was not in the loop at all. In fact, Murtagi's command was left so completely out of the loop that they did not learn of Amer's decision to order a general retreat until they saw the Egyptian units streaming westward toward the canal. While this bypassing of Murtagi's command may well have been the result of Amer's panic on June 5 and 6, the point is that Murtagi's command could not possibly have been a problem for the Egyptians because it played no role in the actual campaign, and does not seem to have confused anyone at all. Everyone at both higher and lower echelons simply ignored the new command and acted according to the original command and control arrangements.<sup>213</sup>

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<sup>212</sup> For example, see Gawrych, "The Egyptian Military Defeat of 1967," pp. 280-281.

<sup>213</sup> Gamasy, pp. 47-71.

### *The Causes of Egypt's Defeat*

Overall, blame for the Egyptian collapse must be borne equally by the poor performance of Cairo's tactical and strategic leadership. This assessment is most clearly illustrated by comparing Egyptian military effectiveness in 1956 and 1967. There are both important similarities and important differences in Egyptian performance in these two wars. The similarities exist at the tactical level where Egyptian forces performed consistently poorly, while the differences lie primarily at the strategic level, at which the Egyptians performed adequately in 1956 and poorly in 1967. However, the inept performance of Egypt's high command in 1967 does not fully explain the extent of their defeat. Instead, one must consider the tremendous gap that had opened up between Egyptian and Israeli tactical capabilities.

In both 1956 and 1967, Egyptian units performed quite well when conducting static defensive operations. In both wars, unit cohesion was good initially but broke down during the retreat, and particularly when the Israelis were able to cut the Egyptians' escape routes through the passes in western Sinai. In both wars, Egyptian armored reserves did extremely poorly in combat with Israeli forces and showed little ability to maneuver, improvise, or act flexibly. However, there were differences, of course. One key difference between Egyptian performance in the two wars was that in 1956 Egyptian operational reserves were committed much more quickly than in 1967. In 1967, the panic and confusion in the command structure probably were the principal reason for the inactivity of most of the Egyptian reserves, particularly Shazli's Armored Force and the 6th Mechanized Division. However, three points are in order here. First, in 1967 the General Staff did commit 4th Armored Division--the strongest unit in the Egyptian Army--at the right time and with an entirely appropriate mission, so they cannot be said to have failed completely on this count. Second, as noted above, none of the commanders further down the chain of command took it upon themselves to execute their missions on their own initiative even though it was clear that the General Staff was no longer functioning effectively. Third, given the actual performance of Egyptian mechanized formations in combat it is difficult to see how even a timely commitment of Shazli's Armored Force and the 6th Mechanized Division would have significantly altered the course of the battle. The war would have looked different, but the results almost certainly would have been the same.

Another important difference between Egyptian performance in 1956 and 1967 was the conduct of the retreat. In 1956, Egyptian withdrawal orders were more detailed and an attempt was made to conduct an orderly withdrawal. This broke down rapidly as Egyptian units were pursued and caught by Israeli ground units and harassed by Israeli airstrikes, but the Egyptians were able to get far more of their combat power out of the Sinai than was the case in 1967. It is also noteworthy that in 1956, as in 1967, Egyptian unit cohesion disintegrated during the retreat because of the constant IDF pressure and the need for Egyptian junior officers to act largely on their own. While it is doubtful that more competent senior commanders could have prevented the fall of Sinai to the Israelis (or at least Sinai east of the mountain passes) in 1967, there is no question that better generalship could have resulted in more Egyptian forces making it out of the peninsula intact. In particular, had the Egyptian General Staff moved to immediately secure control of the passes with some of the armored reserves in Sinai and units in strategic reserve in the canal zone they almost certainly would have gotten far more units out. In addition, Cairo might have opted for other operational moves that could have contributed to a more successful retreat. For example, the Egyptians might have tried to use their armored reserves to establish blocking positions on the main north-south roads south of Abu Ageilah (the Israeli breakthrough occurred north of Abu Ageilah so blocking these roads might have prevented the Israelis from pushing southwest to the passes). Conversely, Cairo might have ordered a counterattack northwards with one or more heavy divisions. Such a counterattack probably would have failed, and resulted in the destruction of the assault force, however, it might have kept the Israelis occupied long enough to allow other units in



south-central Sinai to get through the passes.

These additional Egyptian failings aside, the primary difference between the 1956 and 1967 wars was not Egyptian military effectiveness, but Israeli military effectiveness. While, the Egyptians performed in about the same manner and at about the same level of competence as they had in 1956, the Israelis performed incomparably better than they had previously. In 1956, the Israeli Air Force was tiny and really did not enjoy air superiority until the French and British obliterated the EAF on 1-3 November. In 1967, the IAF took out the Egyptian Air Force in one fell swoop and then had sufficient strength to make significant contributions to the ground offensive in Sinai. In particular, Israeli airstrikes took a fair toll of the Egyptians during the retreat from Sinai after their counterair responsibilities had largely been fulfilled and they could turn their attention to interdiction missions.<sup>214</sup> Israel's armored corps was not only dramatically larger than it had been in 1956, but far more capable and had been made the cornerstone of Israeli ground operations. Consequently, Israel's generals designed the entire campaign so that Israeli armored units would have maximum freedom to maneuver and conduct operations as they saw fit to destroy Egyptian units and otherwise disrupt Cairo's operations.

In 1956, Israel's campaign plan had to be rewritten at the last minute to conform to the various political considerations introduced by Tel Aviv's collusion with the British and French, and Ben-Gurion's extreme distrust of the British. Also, the IDF plan labored under Dayan's false impression of Egyptian military effectiveness. Before the 1956 fighting, Dayan believed that the Egyptians would simply collapse if their positions were outflanked or otherwise compromised. Indeed, there is even some reason to believe that Dayan suspected that the Egyptian units would shatter under any sort of sharp assault. This assumption underlay the entire Israeli plan for the Sinai campaign, and for this reason, the Israelis got badly hung up when the Egyptians did not collapse at Abu Ageilah as expected.<sup>215</sup> By contrast, Israel's 1967 plan recognized that the Egyptians would fight fiercely, especially from fixed defenses, and so was designed to minimize the importance of Egyptian fortifications and instead place the burden of defense on Egypt's armored and mechanized reserves. The Israelis correctly assessed that their own armored forces could swiftly defeat their Egyptian counterparts, and by shaping the course of operations to ensure that it was these battles that were decisive, the Israelis won one of the most incredible victories in modern history.<sup>216</sup>

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<sup>214</sup> Many apologists for the Egyptians have blamed their defeat on the destruction of the Egyptian Air Force and Israel's subsequent ability to bring its airpower to bear against the Egyptian army unhindered. This is a gross exaggeration. First, with the exception of their role in the fighting at B'ir Lafhan and a few other clashes, the IAF did not contribute much to the Israeli ground campaign until 6 June. In fact, the IAF did not really bring its full weight to bear against Egyptian ground forces until 7 June. On 5 June, most of the IAF's day was taken up in counterair operations, conducting airstrikes against Egyptian, Syrian, Jordanian, and Iraqi airbases. On 6 June, the IAF was committed to ground support, but the Jordanian front took a higher priority than the Egyptian front. Consequently, far more sorties were directed against the Jordanian forces on the West Bank than against the Egyptian forces in Sinai until the course of the battle had already been decided. Second, Israeli and Western damage assessment teams who canvassed the battlefields in Sinai concluded that, at most, Israeli airstrikes knocked out only 100 Egyptian tanks during the entire course of the war. Clearly then, it was not the Israeli airstrikes that were most destructive of Egyptian combat power. See Historical Evaluation and Research Organization, *A Historical Analysis of the Effectiveness of Tactical Air Operations Against, and in Support of Armored Forces*, hereafter referred to as HERO, (McLean, Va: NOVA Publications, 1980), pp. 35-39, 41-42, 56.

<sup>215</sup> Gawrych, *The Key to the Sinai*, pp. 26-30, 123-127.

<sup>216</sup> For a concurring assessment that the principal difference between the 1956 and 1967 wars was the improvement in Israeli military effectiveness from a western author sympathetic to the Egyptians, see Gawrych, *The Key to the Sinai*, esp. pp. 123-127.

## The War of Attrition, 1967-1970

During the War of Attrition, Egyptian forces again performed poorly. In particular, they manifested many of the same problems at tactical levels that had plagued them in previous wars. However, there were also some signs of improvement. Cairo inaugurated a sweeping program designed to eliminate all forms of politicization in the Egyptian armed forces. Praetorianism and palace-guardism disappeared almost completely, while commissarism was greatly diminished. Soviet influence continued to grow, and by 1972, while still not total, had reached its apogee in Egypt.

### **Depoliticization, Part I**

The Six-Day war was a traumatic experience for Egypt. Nasser, upon realizing the extent of the disaster, attempted to resign as president of the republic on 9 June 1967. Amer and his cronies in the military were also involved in this, seeing the defeat as an opportunity to replace Nasser. However, the Egyptian people poured onto the streets to protest Nasser's resignation and demand that he resume the leadership of the state. Nasser withdrew his resignation and an internal battle developed in which Amer and his loyalists were ousted on 19 June. In August, Amer committed suicide and many of his followers, including Badran and Mahmud were later put on trial and convicted of conspiracy. Domestic issues thus consumed Cairo for about a year after the war.<sup>217</sup>

After the June catastrophe and Amer's failed coup, Nasser realized that he had to depoliticize the military. He had to professionalize the officer corps, and reorient the military so that its sole task was defeating Israel. Nasser believed that only in this way would his regime be safe from military overthrow and would Egypt be able to recoup its lost honor by regaining its lost territory.

Nasser began by cleaning house. He thoroughly weeded out all of Amer's cronies and anyone else who had attained high rank for reasons other than ability. All of Egypt's full generals, and the overwhelming majority of its lieutenant generals and major generals were forced to resign their commissions. In particular, much of the Air Force hierarchy was ousted. Amer's lackey Sidqi Mahmud was finally forced to resign after heading the EAF since the Free Officer's coup and presiding over its destruction on the ground as a result of surprise attacks twice, in 1956 and again in 1967. In all, as many as 800 Egyptian officers, most of the rank of colonel and higher, were cashiered.<sup>218</sup>

Having cleared out all of the political hacks, Nasser then went about promoting the best officers he could find to the newly-opened slots. Throughout the military, the promotion process was reoriented to focus on merit rather than political ties. Nasser went so far as to institute a new law requiring presidential approval for all promotions to colonel and higher so that he could ensure that all promotions to senior commands were made based purely on merit. In addition, this decree allowed Nasser to make most of the initial selections himself, and he scrupulously chose only the most competent and most thoroughly apolitical officers.<sup>219</sup> Indeed, he went so far as to recall to service competent officers that Amer had previously dismissed for suspected disloyalty.<sup>220</sup>

To oversee the rebuilding of his shattered army, Nasser called on four of Egypt's most respected military officers. General Muhammad Fawzi, the former Chief of Staff of the Armed Forces, was made Commander-in-Chief of the Armed forces and Minister of

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<sup>217</sup> Dupuy, p. 343; Gamasy, pp. 72-76; Vatikiotis, pp. 409-412.

<sup>218</sup> Dekmejian, p. 127; Gamasy, pp. 89-90; Gawrych, "The Egyptian High Command in the 1973 War," p. 547; Mohamed Heikal, *The Road to Ramadan*, (NY: Ballantine Books, 1975), p. 42; Korn, p. 89; O'Ballance, *The Electronic War in the Middle East*, p. 32; Edgar O'Ballance, *No Victor, No Vanquished: The Yom Kippur War*, (London: Barrie and Jenkins, 1979), p. 23.

<sup>219</sup> Dekmejian, pp. 34-35; Gawrych, "The Egyptian High Command in the 1973 War," p. 547; Heikal, *The Road to Ramadan*, p. 42.

<sup>220</sup> Gawrych, "The Egyptian High Command in the 1973 War," p. 547.

War (the two posts previously held by Amer and Badran, respectively). Fawzi was a thoroughly professional soldier and a harsh disciplinarian, a quality that proved invaluable in rebuilding Egyptian morale after defeat in Yemen and Sinai.<sup>221</sup> Lt. General 'Abd al-Mun'im Riyad became Chief of Staff of the Armed Forces. Riyad was a superb officer who had distinguished himself in Yemen and then was appointed to oversee the Jordanian Armed Forces on behalf of the United Arab Command established before the Six-Day war. Riyad was unfairly blamed by the Jordanians for their defeat in the ensuing war, and Cairo was only too happy to have him return. In David Korn's words, "Abdul Moniem Riad [sic] was an outstanding officer, young, energetic, and courageous," and Mohamed Heikal called him, "A fine soldier, one of the best Egypt has produced."<sup>222</sup>

Nasser selected Maj. General Ahmed Isma'il 'Ali to replace Muhsin as eastern district commander, Egypt's most important field command because it encompassed the Egyptian army facing Israel across the canal. Isma'il too was considered a highly competent and thoroughly apolitical officer.<sup>223</sup> Mohamed Heikal said of him, "Ismail [sic] was the classic officer, the soldier par excellence--an infantryman, professional, honest, wholly above politics. . . He had not been part of the Free Officer's movement: he was even then considered so unpolitical [sic] that the movement's leaders did not dare tell him of the plot."<sup>224</sup> When Riyad was killed in March 1969 during an Israeli artillery barrage along the canal, Nasser immediately chose Isma'il 'Ali to succeed him as Armed Forces Chief of Staff. Finally, Major General Muhammad 'Abd al-Ghani al-Gamasy was made Isma'il 'Ali's chief of staff. Gamasy too was a highly-respected and highly intelligent officer who had risen to flag rank by ability, not politicking. Heikal remarked of General Gamasy that "Arab politics shocked him to his bones."<sup>225</sup>

Along with the changes in the composition of the officer corps, Nasser also was persuaded to refocus the armed forces entirely on the external security mission, and in particular, on defeating Israel in the inevitable next round of the Arab-Israeli conflict. Nasser accepted General Fawzi's contention that the military's preoccupation with politics had distracted it and led to the 1967 debacle. As he had begun to do after 1956, Nasser shifted the regime's base of power further away from the armed forces (although without divorcing it entirely) and relieved the military of all internal security responsibilities.<sup>226</sup> "In view of the Army's preoccupation with the enemy across the Suez, the security organization and the police emerged as the key tools of internal control. . . . After 1967, the emphasis shifted from praetorianism to professionalism," according to Richard Dekmejian.<sup>227</sup> Finally, Nasser went so far as to create a new entity called the Republican Guard (sometimes referred to as the Presidential Guard), which served as a true palace guard for his regime. With the Republican Guard as a counterweight to the Army, Nasser gave the military free rein to do as they saw fit to prepare for war with Israel.<sup>228</sup>

Fawzi, Riyad, and their staff got to work immediately, reorganizing Egypt's command and control structure to eradicate the failings they saw in 1967. The Sinai front command was abolished, as was the separate ground forces administrative command, and

<sup>221</sup> Gamasy, p. 89; Gawrych, "The Egyptian High Command in the 1973 War," pp. 547-549; Heikal, *The Road to Ramadan*, pp. 105-108; Korn, p. 92.

<sup>222</sup> Korn, p. 108; and Heikal, *The Road to Ramadan*, p. 42. For a concurring opinion, see Gamasy, pp. 89-90, 108.

<sup>223</sup> Dupuy, p. 482; Gamasy, pp. 153-154; The Insight Team of the London Sunday Times, *The Yom Kippur War*, (NY: Doubleday, 1974), [hereafter referred to as "Insight Team"], p. 221;

<sup>224</sup> Heikal, *The Road to Ramadan*, pp. 184-185.

<sup>225</sup> Heikal, *The Road to Ramadan*, p. 186. Also see Insight Team, p. 483.

<sup>226</sup> Barnett, p. 104; Dekmejian, pp. 35-39; Gamasy, pp. 46, 92.

<sup>227</sup> Dekmejian, p. 34. Please note that Dekmejian uses the term "praetorianism" as a synonym for politicization of the military. In this instance, he is referring to what I call palace-guardism.

<sup>228</sup> Dekmejian, p. 36.

authority was concentrated in the General Staff in Cairo and the Eastern District Military Command. A new Air Defense Command was created as the equal of the other three services. This headquarters was given the specific mission of defending Egypt against air attack to prevent a repeat of 1956 and 1967 (and 1948 for that matter.) Likewise, Egyptian military intelligence was thoroughly reformed. Instead of watching the Egyptian officer corps full-time and casting an eye toward Israel every once in a while as it had under Amer, Fawzi redirected its efforts fully against Israel. The internal monitoring function was transferred to the security services, freeing military intelligence to fill the needs of the armed forces for tactical information on their adversary across the canal.<sup>229</sup>

### **The Attrition Strategy**

By September 1968, Nasser had completed most of his immediate reforms and had set in motion most of the longer term programs. By this time, he was anxious to resume the war against Israel. The destruction of the Egyptian Army and Israel's occupation of Sinai were humiliating to Nasser and to Egypt. Moreover, Egypt's defeat in 1967 cost Nasser much of his international prestige and he was eager to regain this. Reigniting the conflict with Israel was crucial to Nasser to allow him to recapture the attention of the Arab masses and perhaps their governments as well.<sup>230</sup>

Nevertheless, Egypt was far from ready to try to retake the Sinai. Although the Soviets--who had also been deeply embarrassed by the poor performance of one of their most prominent clients--quickly replaced virtually all of Egypt's equipment losses, the armed forces needed more than new tanks.<sup>231</sup> Egypt's armed forces were completely demoralized. The command structure had been turned inside out during the purges. Cairo recognized that its doctrine had proven wholly inadequate to fight the Israelis, and other problems hampered much of the military from top to bottom. Consequently, Egypt could not contemplate all out war just yet.

The new General Staff also realized that Israel had certain vulnerabilities, however, and that Egypt had certain strengths that could be employed to advantage. First, there was the huge disparity in population, with Egypt boasting over 30 million people while Israel contained less than 2 million. On top of this, there was Israel's absolute obsession with minimizing casualties, in part a product of the small size of the country. Finally, there was Israel's heavy reliance on reserves and the severe economic burden of keeping its reserves mobilized.

Based on these various factors, Cairo eventually formulated a strategy of attrition. Rather than attempting a major military showdown for which Egypt was completely unready, the Egyptians would harass and attack the Israelis all along the canal, at low levels but on a constant basis. Cairo believed that in this way they could constantly kill Israelis and perhaps force Tel Aviv to keep large numbers of men mobilized and deployed to Sinai. Egypt hoped that this kind of constant economic and psychological pressure might force Israel to withdraw from part or all of Sinai. While this was considered a long shot, the campaign had the more tangible benefits of projecting an appearance of Egyptian action against Israel (which was important for Nasser's domestic and international image), rebuilding the morale of the Egyptian armed forces, and slowly grating on the Israelis and perhaps wearing down their finely-honed combat edge. Later, it came to have the added advantage of allowing the Egyptians the opportunity to give commanders combat experience and to try out schemes that they would later employ during the October war.<sup>232</sup>

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<sup>229</sup> Gamasy, pp. 91-92; Gawrych, "The Egyptian High Command in the 1973 War," pp. 549-550.

<sup>230</sup> Dupuy, p. 343; Vatikiotis, pp. 409-412.

<sup>231</sup> Dupuy, pp. 343-344; Gamasy, pp. 93-96; Herzog, *The Arab-Israeli Wars*, p. 199; Yonay, p. 265.

<sup>232</sup> Dupuy, pp. 361-362; Gamasy, pp. 107-108, 122-126; Herzog, *The Arab-Israeli Wars*, pp. 207-208.

## Course of Operations

This highly rational approach to the war was still in the future when the War of Attrition began on 8 September 1968. On that day, the Egyptians bombarded Israeli positions on the east bank of the Suez, firing 10,000 rounds from hundreds of artillery pieces over the course of several hours.<sup>233</sup> At the time, Nasser simply wanted to lash out at the Israelis and he played the only cards remaining to him. In coming months, these artillery barrages became more common, and the Israelis responded with artillery fire of their own—including destroying valuable Egyptian economic targets along the canal such as the Suez oil refineries and the cities of Qantarah and Ismailia.

When the Egyptians persisted in shelling the Israeli side of the canal despite Israeli retaliation, Tel Aviv began conducting commando operations deep into Egypt as a means of persuading Cairo to call off the campaign. The first of these was a raid against the Nag Hammadi dam in Upper Egypt. In addition to damaging the dam, the Israelis destroyed the two Nile river bridges there and blew up a power transformer on the high voltage line between Cairo and the Aswan dam. This raid clearly frightened Cairo because it suspended its artillery bombardments for almost five months and redeployed troops to key transportation, communications, and industrial targets throughout the country.<sup>234</sup> Another Israeli response to the shelling was to begin construction of the Bar-Lev line, a series of 30 small, fortified strongpoints along the east bank of the canal to provide shelter for Israeli troops watching the canal. Although the Bar-Lev line fortifications were never meant to stop a major Egyptian assault by themselves, they were intended to mitigate the impact of the Egyptian shelling and in this role they performed quite well.<sup>235</sup>

On 8 March 1969, the Egyptians resumed their artillery bombardments by unleashing a massive barrage against the new Bar-Lev forts. Nasser inaugurated this new phase by proclaiming this bombardment to be the opening of the War of Attrition. Thereafter, Egyptian and Israeli artillery exchanges became the norm along the canal line.<sup>236</sup> In April, Egypt attempted to escalate the conflict by conducting commando raids across the canal. Egyptian commando teams began infiltrating across the canal at night at points distant from Bar-Lev line forts and then would ambush Israeli patrols, attack supply convoys, and harass the forts themselves. The Israelis responded by conducting commando raids of their own, usually much deeper into Egypt and frequently doing far more significant damage.<sup>237</sup> For example, on the night of 19/20 July, Israeli commandos landed on Green Island in the northern Gulf of Suez, and destroyed the Egyptian radar located there.<sup>238</sup> Months later, on the night of December 25/26, Israeli commandos landed at R'as al-Gharib, overpowered the Egyptian garrison there, and dismantled and took back with them one of the USSR's newest P-12 (Tall King) long-range early warning radars that had recently been sold to Egypt.<sup>239</sup> In another famous episode, on the night of 8 September Israeli frogmen sank the only two Egyptian missile boats in the northern Gulf of Suez. The next day, Bren Adan landed on the Egyptian coast of the Gulf of Suez with a company-sized force dressed and equipped entirely in Egyptian style, complete with Soviet tanks and APCs captured from the Egyptians during the Six-Day War. Adan's force then drove 45 kilometers along the Egyptian coast, destroying missile and radar sites, killing Egyptian troops, and even capturing one of five new Soviet T-62 tanks in Egypt for trials and evaluation. Ten hours later, the Israelis returned to Sinai with their booty. Nasser was

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<sup>233</sup> Dupuy, p. 357; Herzog, *The Arab-Israeli Wars*, p. 200.

<sup>234</sup> Cohen, pp. 273-277; Dupuy, p. 358; Herzog, *The Arab-Israeli Wars*, p. 200.

<sup>235</sup> Dupuy, pp. 358-361; Herzog, *The Arab-Israeli Wars*, pp. 201-202.

<sup>236</sup> Cohen, pp. 277-278; Dupuy, pp. 362-363; Herzog, *The Arab-Israeli Wars*, pp. 200-202, 207-208; Sharon, pp. 228-232.

<sup>237</sup> Dupuy, pp. 362-363; Herzog, *The Arab-Israeli Wars*, p. 200.

<sup>238</sup> Cohen, p. 281; Dupuy, p. 363.

<sup>239</sup> Cohen, pp. 289-293; Dupuy, p. 364; Herzog, *The Arab-Israeli Wars*, pp. 212-213.

so furious after this episode that he sacked the Armed Forces Chief of Staff, Lt. General Isma'il 'Ali.<sup>240</sup>

Nevertheless, the Egyptian artillery and commando attacks did not cease and so, in July 1969, Israel decided to escalate the conflict by committing its vaunted air force to try to force the Egyptians to cease their attacks. Initially, the IAF concentrated its airstrikes on the Egyptian military bases and SAM sites along the canal. The Egyptians responded with airstrikes of their own, but in their first raid, Israeli fighters shot down 11 Egyptian aircraft for only one IAF plane lost. After that, the Egyptian Air Force mostly stuck to air defense missions and left the offensive part of the war to the artillery units. The Israelis increasingly went after the SA-2 SAM sites deployed along the canal, and enjoyed tremendous success against them. By October 1969, Egypt's SA-2 belt had been largely dismantled by Israeli airstrikes. In the first two months of the air campaign the IAF flew 1,000 sorties against Egypt while Egypt managed less than 100. During this period, the Egyptians lost 21 planes, virtually all in air-to-air combat, while the Israelis lost only three, and these to SAMs and anti-aircraft artillery (AAA).<sup>241</sup>

The Egyptians still kept up their intermittent shelling and commando raids. The Israelis grew increasingly frustrated, and in January 1970 they escalated the conflict again in hopes of persuading Cairo to ease the attacks on the Bar-Lev line. Their strategy this time was to begin conducting deep bombing raids throughout Egypt, but especially against military and industrial targets in the Cairo area. The Israelis believed that by concentrating their efforts against the Egyptian military units in the canal zone, they had left the Egyptian people and government untouched by the war, the more so because Nasser's tight control over information made sure that only good news was reported to the populace. The Israelis hoped that by hitting targets in the densely populated areas of Egypt they could drive home to the Egyptian people that they retained complete dominance over the Egyptian military and thereby undermine the regime's credibility.<sup>242</sup>

The Israeli deep penetration raids caused considerable damage and further mauled Egypt's already debilitated SA-2 system. Nasser's reaction, however, was wholly unexpected. Rather than throw in the towel, Cairo asked the USSR to take over the defense of Egyptian air space. The Soviets complied and beginning in March 1970 set up an entirely new, mostly Soviet-manned air defense system employing the latest Russian hardware.<sup>243</sup> The Soviets deployed a new early-warning and air-control radar system. They deployed about 80 batteries of the newer SA-3 SAM system, the SA-7 shoulder-launched SAM, as well as large numbers of new radar-guided AAA pieces. In addition, the Soviets deployed over 100 of the latest model MiG-21J interceptors with Russian pilots. In mid-April, after Israeli pilots first encountered some of the new Soviet-piloted fighters, Tel Aviv decided not to provoke a fight with the USSR and so suspended its deep bombing campaign. However, the Israelis reiterated that they would take whatever means necessary to prevent an extension of the SAM belt to inside of 30 kilometers of the canal.<sup>244</sup>

In the spring, the Egyptians and Russians began pushing their air defenses closer to the canal. On 30 June two Israeli aircraft were shot down by missile batteries located within 30 kilometers of the canal. These new missile sites began taking a heavy toll on

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<sup>240</sup> Dupuy, pp. 363-364; Gamasy, pp. 111-112; Herzog, *The Arab-Israeli Wars*, p. 211; O'Ballance, *The Electronic War in the Middle East*, pp. 90-91.

<sup>241</sup> Cohen, pp. 283-285; Dupuy, pp. 363-365; Herzog, *The Arab-Israeli Wars*, pp. 210, 212.

<sup>242</sup> Cohen, pp. 293-296; Dupuy, pp. 365-366; Gamasy, pp. 113-114; Herzog, *The Arab-Israeli Wars*, pp. 212-214.

<sup>243</sup> For details of Nasser's trip to Moscow and the diplomatic deal worked out there see, Gamasy, pp. 116-119; Heikal, *The Road to Ramadan*, pp. 43-45; Mohamed Heikal, *The Sphinx and the Commissar*, (NY: Harper and Row, 1978), pp. XX-XX.

<sup>244</sup> Cohen, pp. 296-299; Dupuy, p. 366; Herzog, *The Arab-Israeli Wars*, pp. 214-217; O'Ballance, *The Electronic War in the Middle East*, p. 131; Schiff, p. 187; Yonay, pp. 279-291.

Israeli planes and Soviet-piloted MiGs began flying combat air patrols along the canal, whereas previously they had only operated over the Nile delta region. The Israelis became increasingly frustrated with the Soviets and so on 30 July the Israelis set up an aerial ambush in which 12 Israeli Phantoms and Mirages shot down 5 of 16 Soviet-piloted MiGs (with no losses) in a matter of minutes before the others disengaged and fled.<sup>245</sup> Within a week after this first direct Israeli-Soviet clash, the United States stepped in and brokered a cease-fire, bringing the war of attrition to an end.

### **General Observations on Egyptian Military Effectiveness During the War of Attrition**

At the tactical level, only four elements of the Egyptian armed forces really participated in the conflict. First was Egypt's artillery corps, which carried the brunt of Cairo's offensive action against the Israelis. Unfortunately, details are very sketchy, however, a few things can be said. The Egyptians did a good job pummeling the Bar-Lev line fortifications, but this does not say very much. These forts were fixed positions within view of Egyptian artillery spotters on the west bank of the canal and so it was not terribly difficult to shell them as required. By the same token, the Egyptians never really found a way to penetrate these forts, or otherwise get at the Israeli soldiers who manned the line. About the best the Egyptians did was to eventually adopt a policy of randomly firing shells into the vehicle parks and other exterior spaces of the forts in hope of catching Israeli soldiers outside. There appear to have been few counterbattery duels along the canal, probably because the Egyptians Soviet-built guns had greater ranges than the Israeli artillery pieces and so Cairo could deploy them well back from the canal, where they could still hit the Bar-Lev forts along the water but were out of range of the Israeli artillery deployed several kilometers east of Suez.

Egypt's commandos performed their missions adequately, but not spectacularly. Cairo did not try any particularly risky commando operations, even after some of the more breath-taking Israeli attacks. This suggests that the Egyptian high command had relatively limited confidence in their abilities. The most celebrated Egyptian commando raids were a 10 July 1969 raid in which Egyptian commandos successfully ambushed a small Israeli armored patrol, destroyed two tanks and killed 7 soldiers, and a 16 November 1969 raid in which Egyptian frogmen sank three Israeli landing craft in Eilat harbor.<sup>246</sup> However, against these fairly modest victories, the Egyptian commanders suffered numerous defeats. For example, in one of their more ambitious operations, a commando platoon attempted to penetrate to the Mitla pass in February 1970 to set up an ambush there, but the unit was discovered and the entire force was either captured or killed.<sup>247</sup> Similarly, during the construction of the Bar-Lev line Egyptian commandos attempted to capture one of the new Israeli forts, but they were beaten back with heavy losses.<sup>248</sup> In addition, Ariel Sharon, the commander of Israeli forces in Sinai 1970-1973, noted that most of the Egyptian commando operations were conducted close enough to the canal so that they could be monitored and controlled by senior Egyptian officers on the west bank of the canal, indicating that the Egyptians had little confidence in the ability of their commandos to act independently without direction from higher authority<sup>249</sup>. In confirmation of Sharon's point, Egypt's most successful commando operations were carried out close to the canal and, with the exception of the frogman attack on Eilat, most of Egypt's deeper commando

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<sup>245</sup> Cohen, pp. 299-309; Dupuy, pp. 366-367; Herzog, *The Arab-Israeli Wars*, pp. 217-219; Yonay, pp. 299-302.

<sup>246</sup> Cohen, p. 281; Dupuy, pp. 363, 368; Herzog, *The Arab-Israeli Wars*, pp. 209, 215; Yonay, pp. 273-274.

<sup>247</sup> Herzog, *The Arab-Israeli Wars*, p. 215.

<sup>248</sup> Herzog, *The Arab-Israeli Wars*, p. 208.

<sup>249</sup> Sharon, p. 264.

raids accomplished little or failed altogether.<sup>250</sup>

The last two elements of the Egyptian military that participated in the War of attrition were Egypt's air and air defense forces, which largely bore the brunt of the Israeli air campaign. The Egyptian Air Force primarily flew intercept missions against Israeli airstrikes. The Egyptians conducted a few air-to-ground missions, but these had little impact. Moreover, after 11 September 1969, when an Egyptian airstrike of 16 aircraft lost eight MiGs to Israeli Mirages and three Su-7s to Israeli AAA and Homing-All-the-Way-Killer (HAWK) SAMs, the Egyptians further curtailed their air-to-ground operations.<sup>251</sup>

In air-to-air combat the Egyptians did extremely poorly. First, the Egyptians were hampered by poor maintenance, which limited the number of aircraft they could put into the air at any time, and poor reaction times which meant that Egyptian aircraft were often just getting airborne while Israeli aircraft either were already in position overhead or already headed home after a successful strike mission.<sup>252</sup> Second, and of far greater importance, Egypt's pilots were extremely mediocre and had tremendous difficulty taking full advantage of the capabilities of their Soviet fighters. The Soviets washed out huge numbers of Egyptians sent for pilot training to the USSR each year. Eventually, the EAF reconciled itself to the fact that despite a population of over 30 million, they could only produce about 30 qualified fighter pilots each year.<sup>253</sup> In combat, the Israelis found the Egyptian fighter pilots to be slow to react, rigid in their flight patterns, unwilling to improvise or seize fleeting opportunities, and easily duped.<sup>254</sup> As a result, the Egyptians consistently were beaten by the Israelis, even though in dogfights they frequently had twice as many fighters engaged as the Israelis. While accounts vary, it appears that the Egyptians wound up on the short end of about a 10:1 kill ratio in air-to-air combat with the Israelis.<sup>255</sup> The ultimate verdict on Egyptian air-to-air performance was rendered by Cairo itself, which first grounded its air force when the IAF began aggressive fighter patrols over Egypt in July 1969, and then simply turned over its air defenses to the Soviets in March 1970.<sup>256</sup>

In the air defense realm, the Egyptians do not appear to have done much better, although there were some mitigating circumstances. The Israelis consistently won the battles against the Egyptian ground-based air defenses until the Soviets arrived in 1970, but this cannot be blamed entirely on Egyptian failings. First, the only SAMs the Egyptians possessed were the old, slow SA-2 system which the Israelis had long since learned how to defeat. In addition, Egypt lacked sufficient numbers of advanced AAA pieces, particularly those with advanced tracking and guidance systems. Thus when the Soviets arrived they brought with them an entirely new array of equipment, and to a certain extent it was the weapons themselves that the Israelis had difficulty countering. Nevertheless, it still should be noted that in 1970 the Soviet rule of thumb was that 3-4 SA-2s fired at a target had a very high probability of destroying it, but with the Egyptians 6-10 SA-2s had

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<sup>250</sup> Dupuy, pp. 357-369; Herzog, *The Arab-Israeli Wars*, pp. 199-202, 207-219.

<sup>251</sup> Cohen, p. 284; Herzog, *The Arab-Israeli Wars*, p. 212; Yonay, pp. 274-275.

<sup>252</sup> Cohen, pp. 294-296.

<sup>253</sup> David A. Korn, *Stalemate: The War of Attrition and Great Power Diplomacy in the Middle East, 1967-1970*, (Boulder, CO: Westview, 1992), p. 92.

<sup>254</sup> Cohen, see esp. pp. 281-284; Yonay, see esp. pp. 271-273.

<sup>255</sup> The exact numbers of Israeli and Egyptian planes lost in air-to-air combat during the War of Attrition is unclear. Various sources present very different counts, and unfortunately, in many cases do not differentiate among Israeli and Arab losses on each front, instead simply lumping together the final tallies of Israeli combat with Egypt, Syria and Jordan. As best I can determine, it appears that the Egyptians lost 100-125 aircraft in air-to-air combat with the Israelis during this period, while the Israelis lost 5-15 planes. See, Frank Aker, *October 1973: The Arab-Israeli War*, (Hamden, CT: Archon Books, 1985), p. 46; Dupuy, p. 365; Gamasy, p. 113; Herzog, *The Arab-Israeli Wars*, pp. 209-217; Luttwak and Horowitz, p. 302; O'Ballance, *The Electronic War in the Middle East*, p. 127; and Yonay, p. 265.

<sup>256</sup> On the Egyptian decision not to fight Israeli aircraft for control of Egyptian airspace, see Yonay, p. 273.



only a slightly better than even probability of killing the target.<sup>257</sup>

Despite their constant defeats, the Egyptians were remarkably courageous. Egyptian soldiers, pilots, missileers, gunners, and commandos executed their missions with enthusiasm and determination throughout the war. Indeed, Egypt's fighter pilots staged a sit-down strike to protest their being grounded after their heavy losses in aerial engagements with the IAF in the summer of 1970.<sup>258</sup> Edgar O'Ballance has commented at some length on the bravery of Egypt's military during the War of Attrition, noting that:

It should be mentioned that the outfought, inexperienced Egyptian pilots constantly had a go at Israeli aircraft despite casualties and losses, that gunners in positions along the canal stood by their guns despite almost constant aerial and artillery assaults, and personnel working frantically to restore the SAM box as it was shattered nightly showed courage and persistence of a high order.<sup>259</sup>

For a long time the Egyptian pilots were generally inferior to their Israeli counterparts in machines, skill, and experience, but this knowledge did not prevent many of them tackling the Israelis in combat regardless of their disadvantages and losses.<sup>260</sup>

Opposed to the bravery of Egypt's forces were the problems they displayed with information. First, Egypt's intelligence effort was abysmal. The air force did not conduct enough reconnaissance missions and the information they collected was frequently misinterpreted. In particular, Egyptian intelligence continued to report whatever they believed Nasser wanted to hear. Thus in 1969 Egyptian intelligence assessed that 65-80 percent of the Bar-Lev line had been destroyed, when in fact Egyptian artillery barrages had done comparatively little damage to the Israeli fortifications.<sup>261</sup> Similarly, Cairo's forces continued to dissemble, exaggerate, and just not pass on bad information. For example, when Adan's *faux* Egyptian armored force was driving along the Egyptian coast destroying every military facility it encountered, the armed forces sent a stream of misleading information up the chain of command. Nasser was infuriated by his inability to find out exactly what was happening and Mohamed Heikal claims that Nasser accused the military of "behaving in the 1967 way."<sup>262</sup>

At the strategic level, it is hard to find fault with Cairo's generalship. Fawzi, Riyadh, Isma'il, Gamasy, and the other members of Egypt's high command developed a reasonable method of implementing the political directive to resume the conflict with Israel. The Egyptians correctly identified a number of Israeli vulnerabilities, correctly identified certain strengths Egypt possessed and then developed an efficient method of employing those strengths to strike at the Israeli vulnerabilities. Indeed, the continuous success of the General Staff's methods is demonstrated by Israel's repeated escalations of the fighting. While Egypt made the first move--launching the artillery attacks and commando raids against the Israeli side of the Suez canal--Israeli took most of the steps after that--deep commando raids against Egyptian industrial targets, commitment of the Israeli Air Force, and the deep bombing missions against targets in the Nile delta. In each of these cases, the Israelis escalated the level and/or extent of the violence they employed to try to force the Egyptians to cease their attacks on the Bar-Lev line. The Egyptians' success can be seen in

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<sup>257</sup> Cohen, p. 284.

<sup>258</sup> O'Ballance, *The Electronic War in the Middle East*, p. 134.

<sup>259</sup> O'Ballance, *The Electronic War in the Middle East*, p. 12.

<sup>260</sup> O'Ballance, *The Electronic War in the Middle East*, p. 133.

<sup>261</sup> O'Ballance, *The Electronic War in the Middle East*, p. 65.

<sup>262</sup> Heikal, *The Road to Ramadan*, p. 67.

Israel's frustration in not being able to accomplish this goal.

Ultimately, the General Staff did miscalculate. Apparently, the Israeli deep bombing missions really touched a nerve with the Egyptian leadership. In his memoirs, Gamasy implies that Nasser was genuinely concerned that these attacks would prompt the Egyptian populace to move against the regime, despite their being little actual evidence of popular unrest. Another possibility is that Nasser simply saw the attacks as humiliating, detrimental to his prestige, and demoralizing to his troops and subjects. In any event, Nasser's decision to turn Egypt's air defense over to the Soviets was certainly a slap in the face to the Egyptian military--but not necessarily to its generals. Nasser's move was a recognition that at the tactical level, Egypt lacked the weapons and the skill to defeat the Israelis. However, it said nothing about Egyptian strategy or the conduct of the war by the General Staff. This is demonstrated in the fact that Egypt retained the same strategy and Nasser did not replace any of his senior military commanders.

This is not to suggest that Egypt's strategic conduct of the War of Attrition was flawless. Almost certainly, there were actions the Egyptians could have taken that they didn't and missions that they should not have tried but did. However, in the end the Egyptians accomplished many of their goals, and this was primarily the result of good generalship which recognized the job at hand and the tools available and developed a practical approach by which the means employed attained the ends desired. In particular, Egypt's generals recognized the tactical limitations of their troops and tailored a strategy that allowed them to achieve their goals with the forces available. Overall, their performance was inelegant, but effective.

### **The October War, 1973**

The first four days of the October War undoubtedly witnessed Egypt's finest performance in combat in the modern era. However, this sudden effectiveness was largely the result of six years of painstaking preparation during which time, Cairo's generals devised a method by which they could avoid the areas of military performance which had proven so problematic for Egyptian forces over the previous 25 years. When the Israelis forced the Egyptians to diverge from their carefully-laid plans, Egyptian forces fell back on their old patterns of behavior and were once again routed. Politicization of the Egyptian military in all its various forms reached a nadir during this period, allowing the emergence of a core of competent generals who deserve the credit for Egypt's initial successes. Egyptian reliance on Soviet methods, while never total, was at its height during this period.

### **The Change in Regimes**

Gamal 'Abd al-Nasser died in 1970 shortly after the conclusion of the cease-fire that ended the War of Attrition. In the power struggle that followed, Anwar Sadat, Nasser's Vice President, surprised everyone and emerged as Nasser's successor. As testimony to the Egyptian military's new professionalism, the Army stayed out of the internal power struggle almost completely. Thus when Sadat finally consolidated power in 1971, he purged many of the top levels of the civilian ministries but left the military almost completely intact.<sup>263</sup>

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<sup>263</sup> Heikal, *The Road to Ramadan*, pp. 105-108.

For domestic political reasons, Sadat was anxious to resolve the Egyptian-Israeli conflict. Initially, he tried to reach a negotiated settlement with Tel Aviv, and actually offered fairly generous terms--at least compared to previous Egyptian stands. Ultimately, the Camp David Accords were fairly similar to Sadat's original offers. However, in 1971 Tel Aviv was still flush with its astounding victory in the Six-Day war and was enjoying the comparative security brought by its huge buffer zone in Sinai. Consequently, Sadat's diplomatic efforts came to naught and he turned to the military option to try to solve his problem.

## **Depoliticization, Part II**

Sadat continued, and in some ways even reinforced, Nasser's policy of professionalizing the Egyptian military. Sadat reaffirmed Nasser's decree that promotions be determined by merit rather than loyalty and generally distanced himself from the military rebuilding and planning processes. According to Heikal, "Remembering the disasters of 1967, he [Sadat] was determined that the professional soldiers should be left to run their own show."<sup>264</sup> Like Nasser, Sadat appointed only competent, professional officers to the senior command slots, and sacked those who showed an inclination to dabble in politics.<sup>265</sup> With Sadat's encouragement, General Isma'il 'Ali, who became Sadat's Minister of War in 1972, forbade Egyptian junior officers from even discussing politics so that they would concentrate only on their military tasks and on the mission of preparing for war with Israel.<sup>266</sup>

Sadat assembled a first-rate team of generals to plan and lead the attack he intended to launch against Israel. Sadat called General Isma'il 'Ali out of forced retirement to head the vast intelligence effort against Israel that would serve as the foundation for Egyptian military rebuilding and planning. In 1972, Sadat replaced his first War Minister, General Sadiq, with Isma'il. Isma'il's excellent reputation had been bolstered by the thorough, systematic intelligence effort he had organized against Israel. In addition, Sadat recognized that, more important than any of his other qualities, Isma'il was valuable because he had an intuitive understanding of the abilities and limitations of the Egyptian soldier.<sup>267</sup> Sadat appointed Lt. General Sa'd ad-Din Shazli as Armed Forces Chief of Staff. While he had an excellent military education and a good theoretical understanding of military operations, his service record was rather appalling: he was one of the few Egyptian officers to surrender to the Israelis while a company commander at Fallujah in 1948; he retreated ahead of the Israeli attack as a battalion commander in 1956; he did poorly in Yemen; and he was among the first senior officers to flee Sinai in 1967--abandoning his armored division task force at the height of the Israeli offensive. Shazli's continued rise through the ranks appears primarily related to his appearance and demeanor: he was a paratrooper, handsome, dashing, a thorough braggart, and enormously charismatic. Sadat picked Shazli to be Chief of Staff because of Shazli's tremendous rapport with Egypt's soldiery, believing he could close the split between Egypt's officers and enlisted personnel, and that he would inspire Egyptian troops in the fight against Israel. Moreover, Sadat knew that he could count on Isma'il to watch Shazli and prevent him from becoming too much of a problem.<sup>268</sup> To oversee the detailed planning and day-to-day operations of the war, Sadat

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<sup>264</sup> Heikal, *The Road to Ramadan*, pp. 12-13. Also see, O'Ballance, *No Victor, No Vanquished*, p. 23.

<sup>265</sup> In particular, Heikal points out that an important reason that Sadat cashiered his first Minister of War, General Sadiq, was that Sadiq began trying to influence what Sadat believed were purely political decisions, principally the degree of Egyptian cooperation with the Soviets. Heikal, *The Road to Ramadan*, p. 183.

<sup>266</sup> Gamasy, pp. 155-157.

<sup>267</sup> Gamasy, pp. 153-157; Gawrych, "The Egyptian High Command in the 1973 War," pp. 549-551; Heikal, *Road to Ramadan*, pp. 135, 183-185.

<sup>268</sup> Gawrych, "The Egyptian High Command in the 1973 War," p. 551; Heikal, *Road to Ramadan*, p. 185; Insight Team, pp. 227-228; O'Ballance, *No Victor, No Vanquished*, pp. 21-22; Perlmuter, p. 191, fn. 15.

made General Gamasy the Deputy Chief of Staff for Operations, the second most important slot on the Egyptian General Staff.<sup>269</sup> Finally, Sadat picked Air Vice Marshal Muhammad Husni Mubarak to head the Egyptian Air Force. Mubarak had earned high marks in Yemen and had not tarnished his image in 1967. He had the reputation of being a sober thinker who would not push his forces beyond their limits, an important quality given the restricted role the EAF was expected to play against Israel.<sup>270</sup>

### **Egyptian Planning**

After the Six-Day war, Cairo began to think about going to war with Israel in a way it never had previously. Led by Isma'il 'Ali in his capacity first as Chief of Staff under Nasser and later as Director of Military Intelligence, Egypt attempted an objective assessment of Israeli and Egyptian strengths and weaknesses. In particular, the Egyptians studied the enormous number of interviews Israeli field commanders gave after the Six-Day war to develop a sense of how the Israelis thought and fought, and their impressions of Egyptian qualities. Egyptian officers were encouraged to study the Israeli military, Israeli society, and even to learn Hebrew, which previously had been prohibited. Egyptian intelligence prepared detailed studies of Israeli strategy; the geography, topography, and meteorology of the Sinai; Israeli "psychological temperament;" Israeli order of battle; and the Bar-Lev fortifications. Cairo concluded that Israel's greatest advantages were the tremendous flexibility and ability to maneuver of their forces which contributed to "outstanding" capabilities in armored warfare and dogfighting. At the same time, they recognized Israel's extreme aversion to casualties, its inability to remain mobilized and on a war-footing for more than a few weeks, and its overconfidence resulting from its tremendous victory in 1967.<sup>271</sup>

Cairo performed the same sort of analysis on its own forces and capabilities. According to General Gamasy, Isma'il "had developed the conviction that the human element--the quality of the fighter--and not the weapon was what counted in victory."<sup>272</sup> The Egyptians concluded that their troops performed poorly in mobile warfare, combined arms operations, dogfights, and whenever they were outflanked or encircled. They admitted that their forces did poorly in maneuver combat because this form of warfare required initiative, improvisation, and flexibility--all of which their junior officers lacked. However, they also recognized that their troops enjoyed comparative success when fighting from fixed defenses and that, ultimately, Egypt could keep a far larger army in the field for far longer than could the Israelis. In addition, the Egyptians recognized that their strength was really in their infantry, who bore the brunt of the defensive burden, and not in their armor, which the Israelis had consistently ripped apart in combat.<sup>273</sup>

An important conclusion of Egypt's analysis was that many of the problems that had proven detrimental in past wars were a product of Egyptian culture and thus could not be changed quickly or easily but had to be worked around. For example, the Egyptians concluded that the constant deception, prevarication, and distortion of information they had experienced at all levels in all of their wars was derived from Arab cultural traits. Indeed. Mohamed Heikal went so far as to write in his column in *Al-Ahram* that Israel had benefited from certain "behavioral flaws," that resulted in delays in reporting "unpleasant

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<sup>269</sup> O'Ballance, *No Victor, No Vanquished*, p. 22.

<sup>270</sup> Gamasy, pp. 154-155, 206; O'Ballance, *No Victor, No Vanquished*, pp. 278-279; Vatikiotis, p. 444.

<sup>271</sup> Hassan El Badri, Taha El Magdoub, Mohammed Dia El Din Zohdy, *The Ramadan War, 1973*, (NY: Hippocrene, 1974), pp. 18, 23-24; Dupuy, p. 347; El-Edroos, p. 490; Chaim Herzog, *The War of Atonement*, (London: Weidenfeld and Nicolson, 1975), pp. 13-14; Korn, p. 91; O'Ballance, *No Victor, No Vanquished*, p. 23.

<sup>272</sup> Gamasy, p. 157.

<sup>273</sup> Adan, p. 63; Badri et. al., pp. 17-21; Dupuy, pp. 347-348; Roy K. Flint, Peter W. Kozumplik, Thomas J. Waraksa, *The West Point Military History Series: The Arab-Israeli Wars, The Chinese Civil War, and the Korean War*, (Wayne, NJ: Avery Publishing Group, 1982), p. 15.

truths."<sup>274</sup> Cairo's response was to try to skirt the problem altogether by building a large signals intercept site on Jebel Ataqah, a hill west of the Suez canal. The Israelis were notorious for broadcasting even the most sensitive information in the clear in battle, and Egypt reasoned that it could get accurate reports on the situation at the front by intercepting Israeli situation reports, rather than having to rely on their own troops for the information they needed.<sup>275</sup>

Isma'il and Gamasy then developed an operational concept for an offensive across the Suez derived from these assessments of Egyptian and Israeli capabilities. They consciously tailored their planned operations to the actual capabilities of their forces and the Israelis. First, the offensive would have very limited goals. Sadat needed to be able to cross Suez, and that was what he ordered Isma'il to do. If the Army could liberate all of Sinai, so much the better, but all Sadat required for his diplomatic gambit was for Egyptian troops to get across the canal and establish a bridgehead on the east bank. Nevertheless, there was tremendous pressure from within the military and elsewhere in the government to reconquer all of Sinai, or at the very least to drive to the line of passes in western Sinai. Indeed, these more ambitious goals were embodied in the existing Egyptian plans for a cross-canal offensive, which called for a three-phased advance: phase I would be the crossing of the canal and establishment of a bridgehead, in phase II the Egyptians would break out to the line of the passes, and phase III would be a general offensive across Sinai and possibly into Israel.<sup>276</sup>

Isma'il, however, was dead-set against attempting any operation that was beyond the capabilities of his forces, and he considered these latter schemes to be extremely dangerous. Although Isma'il believed it was entirely within the capabilities of a rebuilt Egyptian Army to cross the canal and gain a foothold there, he concluded that even a drive to the passes was almost certainly beyond Egypt's military power at that time. In response, Isma'il paid lip-service to the original plan, but ordered Gamasy to concentrate all his attention on phase I of the operation, the canal-crossing and establishment of a bridgehead in Sinai. Phase I was planned down to the last detail, every contingency was examined, all equipment and capabilities needed for phase I were procured, and all of Egypt's training and exercises were geared toward executing phase I. The other phases--the breakout to the passes and the reoccupation of eastern Sinai--were completely ignored: planning never progressed beyond the vaguest outlines and Egyptian forces never trained to execute them.<sup>277</sup>

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<sup>274</sup> This editorial appeared in the 28 June 1968 issue of *Al-Ahram*. Cited in Raymond W. Baker, *Sadat and After: Struggles for Egypt's Political Soul*, (Cambridge, MA: Harvard University Press, 1990), p. 188.

<sup>275</sup> Dupuy, pp. 346-348. Also see, Mohammed Heikal, "An Interview with Lt. General Ahmed Ismail," *Journal of Palestine Studies*, Vol. III, No. 2., p. 217; Insight Team, p. 211; O'Ballance, *No Victor, No Vanquished*, p. 157.

<sup>276</sup> Adan, p. 85; El Edroos, pp. 492, 508; Flint et. al., p. 16; O'Ballance, *No Victor, No Vanquished*, p. 23; Maj. General D. K. Palit, *Return to Sinai: The Arab Offensive, October 1973*, (Dehra Dun: Palit and Palit Publishers, 1974), p. 40.

<sup>277</sup> Badri et. al., p. 17; Flint et. al., p. 16; Gamasy, pp. 264-272; Herzog, *The War of Atonement*, p. 37; Insight Team, p. 231; O'Ballance, *No Victor, No Vanquished*, p. 339; Palit, p. 43; Lt. General Saad El Shazly, *The Crossing of the Suez*, (San Francisco: American Mideast Research, 1980), p. 37. Note that in his memoirs, Shazly claims that he and Isma'il made plans for a breakout to the passes, the old phase II, because Sadat wanted such an operation, but that both generals felt such an operation doomed to failure and never intended to implement it. Shazly's memoirs are extremely self-serving, and all other sources make clear that it was Isma'il alone who opposed any operation beyond the bridgehead. Indeed, the most authoritative Egyptian accounts, those of Gamasy and Egyptian National Security Adviser Hafiz Isma'il, point out that it was Shazly who argued with General Isma'il and pushed for the implementation of phase II after the initial success of phase I on 6-8 October. It seems clear that, having recognized that General Isma'il had been right and that the attack to the passes was well beyond Egyptian capabilities, Shazly was attempting to claim in his memoirs that he had been in agreement with Isma'il all along, as he does on many other points. Compare Shazly, p. 37, with Gamasy, pp. 264-272.

For the crossing of the canal and securing of a bridgehead in Sinai, no expense was spared and no task left undone. The operation would be a set-piece offensive beginning with a surprise attack. Surprise was crucial to Isma'il first because Israel's heavy reliance on reservists meant that if the Egyptians could attack before the Israelis were mobilized they would face only a small IDF force in Sinai. Of greater importance, was that by surprising Tel Aviv he hoped to be able to seize and hold the initiative and thus dictate the terms of battle to the Israelis. By forcing the Israelis back onto the defensive, Isma'il would be able to shape operations in the direction of greatest Egyptian strength and avoid those areas of greatest Egyptian weakness.<sup>278</sup>

The offensive would employ an attrition strategy rather than a war of maneuver, at which the Israelis excelled. The Egyptians would rely on a strategic offensive coupled with a tactical defensive: relying on surprise, they would steal a march on the Israelis, cross the canal, push 5-10 miles into Sinai and then dig-in. They would then let the Israeli armor crash against their defensive lines, wearing the Israeli forces down in bloody attacks against entrenched infantry, rather than attempting decisive maneuvers of their own, which Isma'il concluded the Israelis would quickly defeat and then turn against them.<sup>279</sup> As the Insight Team of *The Times of London* concisely described it:

Mobile warfare demands a level of initiative among junior officers, a level of confidence in senior ones, and the willingness of both to communicate, that the Egyptian Army simply did not possess. . . . Ismail's [sic] plan . . . took account of these continuing weaknesses. His brilliant combination--strategic offensive, tactical defensive--was designed precisely to avoid taking on the Israelis at their own game. With his slow advance by 'creeping crawling' missile infantry, Ismail had changed the name of the game--to the Israelis' discomfort.<sup>280</sup>

In addition, to neutralize Israel's two great advantages in armored warfare and airpower, the Egyptians deployed enormous numbers of early-generation Soviet anti-tank guided missiles (ATGMs), rocket-propelled grenades (RPGs), mobile AAA systems, and SAMs.<sup>281</sup>

To compensate for past difficulties with combined arms, initiative and improvisation at tactical levels, the Egyptian high command came up with a novel approach. First, the General Staff scripted the entire operation down to the last detail. Every action of every squad and every platoon in the Egyptian army was detailed at every stage of the operation by Egyptian General Staff planners. The Egyptian script for the canal-crossing and securing of a bridgehead was a monumental achievement, reflecting a superb understanding of military operations, but it was up to Egyptian soldiers and field officers to make it work. Consequently, the General Staff went to great lengths to make sure their forces could execute this plan. Isma'il and Shazli decreed that every Egyptian soldier should have only one mission, and that he should learn to perform that mission by heart. Full-scale mock-ups of the Israeli fortifications, the terrain on the east bank of the Suez, and the canal itself were constructed and used by the Egyptian units to learn their missions. Operations were rehearsed *constantly* until every member of every unit knew exactly what he was supposed to do at every step of the operation. The entire offensive

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<sup>278</sup> Badri et. al., pp. 19-20; El Edroos, p. 491; Herzog, *The War of Atonement*, p. 28.

<sup>279</sup> Badri et. al., pp. 19-20; El Edroos, p. 491; Insight Team, p. 164; Donald Neff, *Warriors Against Israel*, (Brattleboro, VT: Amana Books, 1988), p. 214.

<sup>280</sup> Insight Team, p. 231.

<sup>281</sup> Badri et al., pp. 19-20; Cordesman, *The Arab-Israeli Military Balance*, p. 37; El Edroos, p 490; Palit, p. 40.

was rehearsed as a whole 35 times before the actual attack, according to General Shazli.<sup>282</sup> Egyptian soldiers and officers were encouraged to memorize a series of programmed steps, and during the actual canal-crossing operation, junior officers were specifically forbidden from taking actions that were not specifically ordered by the General Staff plan.<sup>283</sup> Chaim Herzog described this process:

For years the individual soldier was trained in his particular role in war: each unit dealt with its own problem and nothing else. One unit did nothing for three years but train in passing across a water barrier a pipe for transporting fuel; while every single day for three years bridging units would train in backing up trucks to a water barrier, stopping abruptly at the water's edge, causing the elements of the PMP heavy folding pontoon bridge on the truck to slide by momentum into the water, before they bolted together the two elements of the bridge and drove off. Twice a day during four years these units assembled and dismantled the bridge. Similarly, every day for years all operators of Sagger anti-tank missiles lined up outside vans containing simulators and went through half an hour's exercise in tracking enemy tanks with their missile. . . . This system was repeated right down the line in the army until every action became a reflex action.<sup>284</sup>

In another example, 80 Egyptian engineering units practiced blasting down sand ramparts such as those Israel had constructed on the east bank twice a day and twice more every night for two years. Because of this detailed scripting and rote memorization of tasks, the General Staff planners were able to write combined arms coordination, tactical maneuver, and synchronized movement into the operations order, thereby obviating the need for tactical commanders to innovate or act on their own initiative--at least as long as things went according to plan. Thus it was vital for Egypt to gain surprise and dictate the course of battle to the Israelis so that they could prevent the Israelis from excessively unraveling their intricate plans.<sup>285</sup>

To ensure surprise, Egypt undertook a vast and highly sophisticated deception and camouflage campaign. First, a draconian secrecy was imposed on the entire operation, which worked quite well, especially in keeping secret the timing of the attack. Even the Egyptian foreign minister did not learn about the attack until it had already begun. The Egyptians built enormous sand ramparts on the west bank so that their activities could not easily be monitored by Israeli forces on the east bank. Beginning in 1968, Cairo began staging frequent, large-scale exercises depicting a canal-crossing operation so that over time Israel became accustomed to them. From January to October 1973 alone, Egypt mobilized its reserves and practiced a canal-crossing operation 22 times.

Eventually, the actual build-up for the real attack was carried out as if it were one of these exercises and Tel Aviv bought the ruse right up until the day of the attack. Under the cover of an exercise, the Egyptians mobilized their forces and brought them up to the canal banks but then sent back only part of each unit, keeping the rest in secret bunkers along the canal banks. Equipment was transported to the canal at night and then buried in place before dawn. The Egyptians even allowed the details of the "exercise" to leak to Israeli intelligence to further convince the IDF that this was nothing more than yet another in a

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<sup>282</sup> Shazli, p. 42.

<sup>283</sup> Adan, pp. 63-64; Armstrong, p. 164; Badri et. al., p. 18; Flint et. al., p. 16; Gamasy, pp. 155-157; Heikal interview with Isma'il, pp. 217-219; Herzog, *The War of Atonement*, pp. 34-37; Insight Team, p. 224; Ibrahim Karawan, "Egypt's Defense Policy," in Neuman, p. 174; Korn, p. 92; O'Ballance, *No Victor, No Vanquished*, pp. 27-30, 338; Palit, pp. 39-40; Shazli, pp. 17-47.

<sup>284</sup> Herzog, *The War of Atonement*, pp. 34-35.

<sup>285</sup> Armstrong, p. 164; Herzog, *The War of Atonement*, pp. 34-37; O'Ballance, *No Victor, No Vanquished*, pp. 27-30.

long series of dress rehearsals. To further lull the Israelis into a false sense of security, Cairo leaked information that Egyptian equipment was in terrible condition, and that the Egyptian air defense system had been largely destroyed during the War of Attrition and had not been rebuilt.<sup>286</sup>

### **Rebuilding the Egyptian Military**

Cairo simultaneously made a major effort to increase the quality of its tactical formations. First, the Egyptians recognized that their greatest problems in past conflicts had been among tactical leadership and so they focused their efforts on the junior officers. Previously, college students and college graduates had been exempt from military service. After 1967 that exemption was removed and enormous numbers of college graduates were drafted into the military--most as junior officers--for indefinite periods of time. Heikal claims that by 1973, of 800,000 men in the Egyptian Army, 110,000 had university degrees, a fantastic proportion for any army.<sup>287</sup> In addition, they heavily recruited technically-skilled personnel to make up for their prior deficiencies. Before his death, Nasser decreed that every tank commander or officer responsible for electronic equipment had to be a graduate of either an engineering or technical school. As a result, by the start of the October War, half of the engineers in Egypt were serving in the armed forces, most in the air force and air defense force, according to General Shazli.<sup>288</sup> Egyptian officer training also was revamped to reflect the lessons of the 1967 war. In particular, the senior leadership tried to encourage initiative, improvisation, and independent action throughout the command structure. Likewise, Egyptian field commanders were urged to report all information with 100 percent accuracy regardless of how bad or embarrassing the truth was.<sup>289</sup>

Determined that this time their air force would not be destroyed on the ground at the start of the war, the Egyptians took steps to improve the situation of the EAF. First, Cairo built hardened aircraft bunkers (HABs) at all of its air bases. A HAB was built for every aircraft in the air force to ensure that it could be protected against Israeli airstrikes. Second, Egypt attempted to increase the quantity and quality of its pilot training. Egyptian pilots were given more flying time than ever before (although they still lagged far behind NATO or Israeli standards) and an effort was made to provide live-fire practice for the planned airstrikes. In addition, just as they did with the ground forces, the EAF built mock-ups in the Egyptian desert of Israeli facilities slated to be hit by airstrikes during the initial assault. The Egyptians built these mock-ups at the exact distance from the Egyptian air base that would launch the attack as they were in reality.<sup>290</sup>

The Egyptians made other changes as well. For example, Cairo went to great lengths to try to overcome the officer/enlisted split that had continued to fester since Ottoman times. As noted above, one of Shazli's most important tasks as Chief of Staff was to solve this problem. Cairo began recruiting more enlisted personnel from the urban middle and even upper classes to soften the class divide between the two groups. Officers

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<sup>286</sup> Adan, p. 69; Badri et. al., pp. 45-47, 51; Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), pp. 22-23; El Edroos, pp. 488, 490, 492; Gamasy, pp. 193-197; Heikal interview with Isma'il, pp. 218-219; Herzog, *The Arab-Israeli Wars*, p. 365; Korn, p. 92; Neff, pp. 121, 127; Shazli, pp. 17, 206-207.

<sup>287</sup> Heikal, *The Road to Ramadan*, p. 35.

<sup>288</sup> Shazli, p. 21.

<sup>289</sup> Armstrong, p. 173; Barnett, pp. 123-125; Flint et. al., p. 16; Gamasy, pp. 155-157; Heikal interview with Isma'il, p. 223; Heikal, *The Road to Ramadan*, pp. 33-35; Herzog, *The War of Atonement*, p. 14; John Keegan, *World Armies*, (London: Macmillan, 1979), p. 196; Korn, p. 91; O'Ballance, *No Victor, No Vanquished*, pp. 26; Palit, p. 83; Shamir, "Arab Military Lessons from the October War," p. 173; Shazli, pp. 21, 47-49.

<sup>290</sup> Cordesman and Wagner, pp. 86-87, 97; Dupuy, p. 547; O'Ballance, *No Victor, No Vanquished*, pp. 277-279, 287; Shazli, p. 19.



were forced to participate in training and exercises with their troops. Officers were denied the overly liberal leave they had previously enjoyed so that they had to spend more time with their men. Shazli devised a program whereby units were assigned simple (and often recreational) tasks that built cohesion, trust, and a sense of accomplishment.<sup>291</sup> Simultaneously, Shazli also began to encourage Egyptian soldiers and officers to be more willing to risk casualties to achieve a goal. Previously, Egyptian commanders had been very loathe to suffer casualties and generally called off an operation when losses began to mount, but Shazli urged them to put completion of the mission over losses.<sup>292</sup>

### **The Soviet Role**

Of course, the Soviets played a very significant part in this rebuilding effort. After the Six-Day War, Nasser turned to Moscow and asked the Soviets to help him repair and reform his army. The Soviets agreed. Soviet advisers were immediately attached to every Egyptian field unit down to brigade. By November 1967, the Soviet presence in Egypt had grown from 500 men to 1,500 men.<sup>293</sup> Eventually, there were 5,000 Soviet advisers in Egypt, deployed with every Egyptian combat unit down to battalion or squadron level. Indeed, in artillery and armor units where the Soviets felt the Egyptians were worst, there were 10 advisers per battalion: two with the battalion headquarters and two more with each company.<sup>294</sup> The Soviets further pushed the Egyptians in the direction of mimicking Soviet methods. Egyptian forces were further reorganized along Soviet lines, for example, by forming Soviet-style all-arms armies. Similarly, the Egyptians increasingly adopted Soviet doctrine and tactics, especially in the areas of tank assaults and anti-tank defenses.<sup>295</sup>

The Egyptians also relied on the Soviets for their weaponry and other military equipment and it was this dependence that caused their relations with the Russians to oscillate wildly. The Soviets were beginning the period of *detente* with the United States, and they feared that an Egyptian attack on Israel would ruin this process. Consequently, Moscow refused to sell certain weapons it considered destabilizing to the Egyptians (like the newest MiG-23 fighter), sold only small numbers of other systems (like the SS-1 Scud surface-to-surface missile), and dragged out the delivery of other items (such as the new T-62 tanks) to try to prevent the Egyptians from going to war. Eventually, Cairo's frustration with Moscow prompted Sadat to "throw out" the Russians in July 1972. In actuality, Sadat did not evict the entire Soviet military presence. He kept all of the Soviet technical and training instructors, as well as those Soviet personnel manning the most sophisticated electronic warfare and radar equipment which the Egyptians could not handle themselves. Effectively, the men he expelled were the operational advisers and most of the Soviet combat units who had arrived during the War of Attrition. These were personnel whose services Egypt believed it no longer required: the Army and Air Force largely had been retrained and there were sufficient Egyptian personnel available to take over most of the other tasks. By early 1973, however, Cairo and Moscow had patched up relations, with the result that a slew of long-promised Soviet weapons poured into Egypt and the Soviet advisory presence crept back in.<sup>296</sup>

Although the Egyptians adopted Soviet methods to a greater extent than they ever had in the past, their mimicry of the Russians was far from total. In fact, many Egyptian senior officers tried hard to minimize the amount of borrowing from the Soviets. Of

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<sup>291</sup> Flint et. al., p. 16; Korn, p. 91; O'Ballance, *No Victor, No Vanquished*, p. 26; Shazli, p. 48.

<sup>292</sup> O'Ballance, *No Victor, No Vanquished*, pp. 26-27.

<sup>293</sup> Heikal, *The Road to Ramadan*, pp. 43-44; Luttwak and Horowitz, p. 300.

<sup>294</sup> Badolato, p. 75; Gamasy, p. 93.

<sup>295</sup> O'Ballance, *The Electronic War in the Middle East*, pp. 52-54.

<sup>296</sup> Badolato, pp. 70-76; Dupuy, p. 374; El Edroos, p. 485; Gamasy, pp. 131, 141, 143-151; Heikal, *The Sphinx and the Commissar*, pp. 201-259.

greater importance still, Egypt's high command found that Soviet practices beyond the tactical level were simply inappropriate to Egypt's situation and goals. Consequently, Egyptian tactical doctrine was revised to a substantial extent in accord with Soviet routines, but beyond that there was little Soviet influence. Egyptian strategy and operational doctrine showed little Soviet flavor whatsoever. In addition, the Egyptians did all of their own planning for the actual offensive. At first, the Egyptians had sought Russian advice and were rebuffed because Moscow did not want to be seen as actively planning the attack on Israel. Heikal remarked that, "The Russians would never discuss operational plans with the Egyptian authorities; nor would they take part in the basic studies behind these plans: they were willing to help with material, but regarded the method by which the occupied territory was liberated as being entirely up to Egypt."<sup>297</sup> Later, especially after Isma'il took over as Minister of War, the Egyptians actively sought to exclude the Soviets from their planning and to keep their intentions and plans secret from the Russians just as they did the Israelis and Americans.<sup>298</sup>

### **The Balance of Forces**

When the Egyptians attacked on the afternoon of 6 October 1973 the Israelis were woefully unprepared for war. Tel Aviv had been completely duped by the Egyptian deception scheme and so had only barely begun to mobilize before the onslaught began. Normally, the Bar-Lev line forts were manned by a regular army unit that was reinforced in times of tension so that each fort had nearly 100 men. Because it was Yom Kippur, the holiest day of the Jewish year, a reserve battalion was holding the forts to allow the regular army soldiers to go home for religious services so that only about 30 reservists was holding each fort. Moreover, during Ariel Sharon's tenure as commander of Israel's southern command, he had closed many of the Bar-Lev forts so that now only 16 were actively manned. Still, the infantry in the Bar-Lev line fortifications were never meant to stop an invasion but simply to serve as a trip wire and a delaying force. Behind the canal, the Israelis had the 252nd Armored Division with three armored brigades, which was intended to serve as the major defensive force until the rest of the Army could be mobilized and sent south (this was expected to take 48-72 hours). A bit more than a brigade's worth of infantry also were scattered at various locations in Sinai. In all the Israelis had about 18,000 men, 300 tanks, and 80-100 artillery pieces available in Sinai when the war began, with the nearest significant reinforcements about 24 hours away.<sup>299</sup>

One additional comment regarding Israeli forces needs to be made. After the 1967 war, the Israelis drew absolutely the wrong lesson from the performance of their armored forces. They came to the conclusion that the tank-airplane team was all-powerful and needed very little support from other combat arms. In particular, they believed that infantry and artillery were not major contributors to modern mechanized warfare. As a result, the Israelis neglected their artillery and infantry forces. In particular, they grossly underestimated the need for armored units to have mechanized infantry and self-propelled artillery support in combat operations. Thus Israeli armored formations frequently had little or no organic infantry or artillery support at the start of the October War.<sup>300</sup>

For the cross-canal assault, the Egyptians had concentrated two armies around Suez: the Second, under Lt. General Sa'd ad-Din Ma'mun and the Third, under Lt. General 'Abd al-Mun'im Wasif. The Second Army was the stronger of the two with three infantry divisions, a mechanized division, an amphibious assault brigade, and an independent armored brigade,. It had the task of assaulting across the canal north of the Bitter Lakes.

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<sup>297</sup> Heikal, *The Road to Ramadan*, p. 157.

<sup>298</sup> Dupuy, p. 390; Gawrych, "The Egyptian High Command in the 1973 War," p. 554.

<sup>299</sup> Dupuy, pp. 399-401.

<sup>300</sup> For a scathing indictment of this mislearned lesson, see Wald, pp. 88-91, 94-97, 107-110. Also see, Cordesman and Wagner, pp. 52-64; Sharon, pp. 303-305.

The Third Army had only two infantry divisions plus a mechanized division and an independent armored brigade, but had the narrower of the two assault sectors, that south of the Bitter Lakes. These armies were even stronger than they sound as most had been reinforced for the assault. In particular, the infantry divisions, which normally comprised two infantry brigades and a mechanized infantry brigade, were each reinforced with an armored brigade, boosting their manpower strength to 14,000 and their tank strength to 200. In addition, the General Staff held another mechanized division, two armored divisions, a paratrooper brigade, an infantry brigade, and miscellaneous other forces in reserve. In all, the Egyptians massed about 300,000 men, over 2,400 tanks, and 2,300 artillery pieces for the war, of which about 200,000 men, 1,600 tanks, and 2,000 artillery pieces were concentrated in the Second and Third Armies for the initial assault.<sup>301</sup> Finally, the Egyptians had concentrated an enormous SAM force to cover the invasion. In addition to over 100 SA-2 and SA-3 batteries, the Egyptians had received 20-40 batteries of the new SA-6 (which had never before been used in combat), as well as hundreds of ZSU-23-4 self-propelled AAA systems and shoulder-launched SA-7s. Overall, the Egyptians deployed more SAMs against Israel than the United States then had in its arsenal.<sup>302</sup>

Although Cairo's quantitative advantage at least initially was enormous, unlike in previous wars with Israel, this time Egypt did not necessarily have a qualitative advantage in weaponry. In the net, the Egyptians and Israelis were about evenly matched. The Centurion was still the favorite of the Israeli armored force, however, they had been receiving sizable numbers of the new American M-60 which was a tremendous improvement over Tel Aviv's obsolete Shermans. The Egyptians on the other hand, had begun receiving the new Soviet T-62 which the IDF concluded was, on the whole about the equal of the M-60 or the Centurion, but the Egyptian armored corps was still mostly made up of the older T-55s. Egypt again possessed superior Soviet artillery and armored personnel carriers, but Tel Aviv fielded better electronic warfare equipment and its air force--with its new American F-4 Phantoms and A-4 Skyhawks--far outclassed the older Soviet MiG-21s and Su-20s in the Egyptian Air Force. Thus on balance, the two sides were about equally armed.<sup>303</sup>

### **The Egyptian Assault, 6 October**

The Egyptian attack across the Suez began at 1400 hours on 6 October with a massive bombardment from 2,000 artillery pieces plus another 1,900 direct-fire weapons combined with 100-150 sorties by the EAF against Israeli airbases and command and control facilities in Sinai. The Egyptian artillery barrage dropped 11,000 shells on the startled Israelis in just the first minute of the attack, suppressing most fire from the Bar-Lev forts during the initial crossing. The airstrikes did virtually no damage to the Israelis, mainly because of poor and inaccurate bombing. Moreover, when IAF fighters arrived they quickly shot down 18 Egyptian planes for no losses, prompting Cairo to cancel a planned second wave of airstrikes.<sup>304</sup> After about an hour of shelling, the first wave of 8,000 Egyptian assault troops began crossing the canal. This first wave was led by battalions of Egyptian commandos. The commandos were picked soldiers who had received the best and most rigorous training Egypt had to offer. Although they were intended for special operations missions, because they were considered the best infantry in the Egyptian Army, a brigade of commandos was assigned to each of the two assaulting armies to spearhead the attack. The commandos' mission was to scale the Israeli sand

<sup>301</sup> Cordesman and Wagner, p. 24; Dupuy, pp. 401-403; Herzog, *The Arab-Israeli Wars*, pp. 239-241.

<sup>302</sup> Aker, p. 54; Cordesman and Wagner, p. 24; Dupuy, 403-405; Hirsh Goodman and W. Seth Carus, *The Future Battlefield and the Arab-Israeli Conflict*, (New Brunswick: Transaction Publishers, 1990), p. 54; Herzog, *The Arab-Israeli Wars*, pp. 239-241.

<sup>303</sup> Cordesman and Wagner, pp. 45-102; Dupuy, p. 598.

<sup>304</sup> Adan, p. 81; Badri et. al., p. 61; Cohen, pp. 345-346; El Edroos, p. 505; Palit, pp. 64-65.

ramparts, bypass the forts and begin setting up anti-tank defenses 1-2 kilometers from the canal to provide cover until heavier forces could get across.<sup>305</sup>

Two more brigades of commandos were helo-lifted in company and battalion-sized forces into Sinai to block Israeli reinforcements heading toward the canal, disrupt Israeli command and control, and generally sow confusion in Israeli rear areas. For the most part, the commandos inflicted very little physical damage to the Israelis. Large numbers of the helicopters were shot down before they were able to land their commando teams. Other teams got lost in Sinai and so failed to carry out their missions. In a couple of cases, the commandos got through and found their targets but still did little damage to the Israelis and usually were wiped out in the fighting. Nevertheless, the Egyptian commandos fought exceptionally hard and created considerable panic in Sinai which prompted the Israelis to take widespread precautions that hindered their efforts to concentrate on stopping the primary assault across the canal.<sup>306</sup>

Isma'il's plan was to launch all five infantry divisions of the Second and Third Armies across the canal simultaneously. He purposely dispersed his effort all along the front rather than massing against one point so that the Israelis would not be able to identify a main thrust and throw all of their available forces against it. Isma'il hoped that the Israelis would either waste time holding back their meager forces to try to identify a main effort that did not exist, or else be forced to disperse their assets across the front where they could be chewed up piecemeal by the much larger Egyptian forces. Isma'il knew that the Israelis would respond by immediately counterattacking with their armored forces in Sinai and their air force. Isma'il's anti-tank teams--led by the commandos--and SAMs would be ready for them and he hoped the Israelis would suffer heavy casualties beating their heads against his missile shield, would conclude that their attacks were fruitless and would then be willing to open serious negotiations with Cairo.<sup>307</sup>

At least initially, things went precisely according to plan, largely due to the outstanding efforts of Egypt's combat engineers. The first wave of troops went across in assault boats and rafts, but immediately thereafter, 40 combat engineer battalions began building two heavy vehicle bridges, one light vehicle bridge, and two pontoon bridges in each division sector. The Israeli Air Force furiously attacked these bridges and despite heavy losses to Egyptian air defenses--especially the SA-6/ZSU-23 combination--the IAF repeatedly hit the bridges. However, the Soviet-designed bridges were sectional and the Egyptian engineers worked miracles replacing the damaged sections to minimize the disruption of movement across the canal. To overcome the Israeli sand ramparts, the Egyptians had developed the novel idea of using high-pressure water pumps to blast their way through. Egyptian engineers had repeatedly practiced this operation and on 6 October the first breaches were cut in the sand barriers in under an hour.<sup>308</sup>

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<sup>305</sup> Badri et. al., p. 37; Colonel Eldar, Lt. Colonel Nahum, Lt. Colonel (res) Tzvi, "Combat Against the Egyptian Commandos during the Yom Kippur War," Translation by Michael Eisenstadt, *Ma'arachot*, Nov-Dec. 1992, pp. 20-22; Gamasy, p. 207; O'Ballance, *No Victor, No Vanquished*, pp. 71-73.

<sup>306</sup> See in particular, Eldar et. al., pp. 20-25. Also see Dupuy, pp. 418, 597; El Edroos, p. 505; Maj. General Shlomo Gazit, "Arab Forces Two Years After the Yom Kippur War," in Williams ed., p. 192; O'Ballance, *No Victor, No Vanquished*, pp. 90-91.

<sup>307</sup> Badri et al., pp. 19-21; Cordesman, *The Arab-Israeli Military Balance*, p. 37; El Edroos, pp. 490-492; Herzog, *The War of Atonement*, p. 28.

<sup>308</sup> Badri et. al., pp. 18-35, 63, 79-82; Cordesman and Wagner, p. 71; Dupuy, pp. 390-416; Gamasy, pp. 210-214; Heikal interview with Isma'il, p. 219; Neff, p. 125; O'Ballance, *No Victor, No Vanquished*, pp. 23-30, 96; Shazli, pp. 51-62, 233. Of course, the contributions of Egypt's combat engineers began long before 6 October. For example, they built the vast sand ramparts on the Egyptian side that hid Egyptian activity from Israeli observers and allowed Egyptian tanks and ATGM teams to fire down on Israeli positions to cover the bridgehead on the east bank. Likewise they built the various mock-ups Egyptian troops used to practice their missions as well as the secret bunkers used to hide troops and equipment before the attack.

The Egyptian plan went exactly as Cairo had hoped and far better than it had expected. As Shazli described it, "The whole operation was a magnificent symphony played by tens of thousands of men."<sup>309</sup> In the first 18 hours of the operation, the Egyptians put 90,000 men, 850 tanks, and 11,000 other vehicles across Suez.<sup>310</sup> Although the Egyptians had anticipated losses of as many as 10,000 killed and 20,000 wounded just crossing the canal, in actuality they suffered only 208 killed.<sup>311</sup> Every unit executed its assigned task as it had rehearsed countless times in the past. The operation was directed entirely by the General Staff, with every decision being referred back up the chain of command to the GHQ headquarters bunker.<sup>312</sup> The Cairo correspondent of *The New York Times* reported that, "The Egyptian Army has doggedly adhered to a comprehensive, preconceived strategic and tactical plan. Military spokesmen insist that there have been no departures from the plan, no improvisations and no unauthorized initiatives by local commanders."<sup>313</sup> Of course this had its down side, even during the canal crossing. For example, the Egyptian Third Army had difficulty bridging the canal and then cutting through the sand barriers because of unforeseen terrain problems. Because the lower-ranking officers had been ordered not to deviate from orders during the crossing, and because no one higher in the chain of command was willing to take the initiative to make decisions, Isma'il was forced to send a senior representative of the General Staff to select new locations for several of the Third Army breaches, ultimately delaying their crossing by 12 hours.<sup>314</sup>

### **The Fight for the Bridgeheads, 7-13 October**

As soon as the Egyptian forces crossed the canal they began consolidating and expanding their bridgeheads. Units which had been tasked to deal with the Bar-Lev forts first isolated and then assaulted these positions. In a few cases, the Israelis were quickly overpowered, but for the most part, the forts only fell to repeated assaults by superior forces or prolonged sieges over many days. Meanwhile, the bulk of the Egyptian infantry divisions began pushing into the hills east of the canal. They established intricate semi-circular defensive positions several kilometers wide with minefields; interlocking fields of fire from tanks, ATGMs, anti-tank guns and automatic weapons; and supported by mortars and artillery on both sides of the canal. Once a defensive position was set, the Egyptians began slowly expanding outward by literally creeping forward in a 180-degree arc. Every advance/attack was conducted in exactly the same manner without variation for the terrain or the Israeli defenders present: Egyptian infantry would push forward, infiltrate any IDF positions, and set up their anti-tank and other heavy weapons. Then Egyptian artillery would lay down a time-phased artillery barrage, behind which Egyptian armor and mechanized infantry would advance to link up with the infantry. Any resistance not driven off by the artillery was dispersed by massive doses of firepower from the forward infantry and the advancing armor. In this way, the Egyptian defensive positions slowly knitted together into divisional and then army-wide bridgeheads.<sup>315</sup>

The Israelis were not idle during this period. Immediately after the first artillery shells began falling, Israeli tanks and aircraft began racing to the canal, only to hit Isma'il's missile shield head on. Israeli aircraft began taking heavy losses to the Egyptian SAMs and

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<sup>309</sup> Quoted in Insight Team, p. 147.

<sup>310</sup> Badri et. al., pp. 61-62; Dupuy, pp. 411-416; Gamasy, pp. 206-209; Shazli, pp. 63-68, 233.

<sup>311</sup> Heikal, *The Road to Ramadan*, p. 33; Herzog, *The War of Atonement*, p. 155.

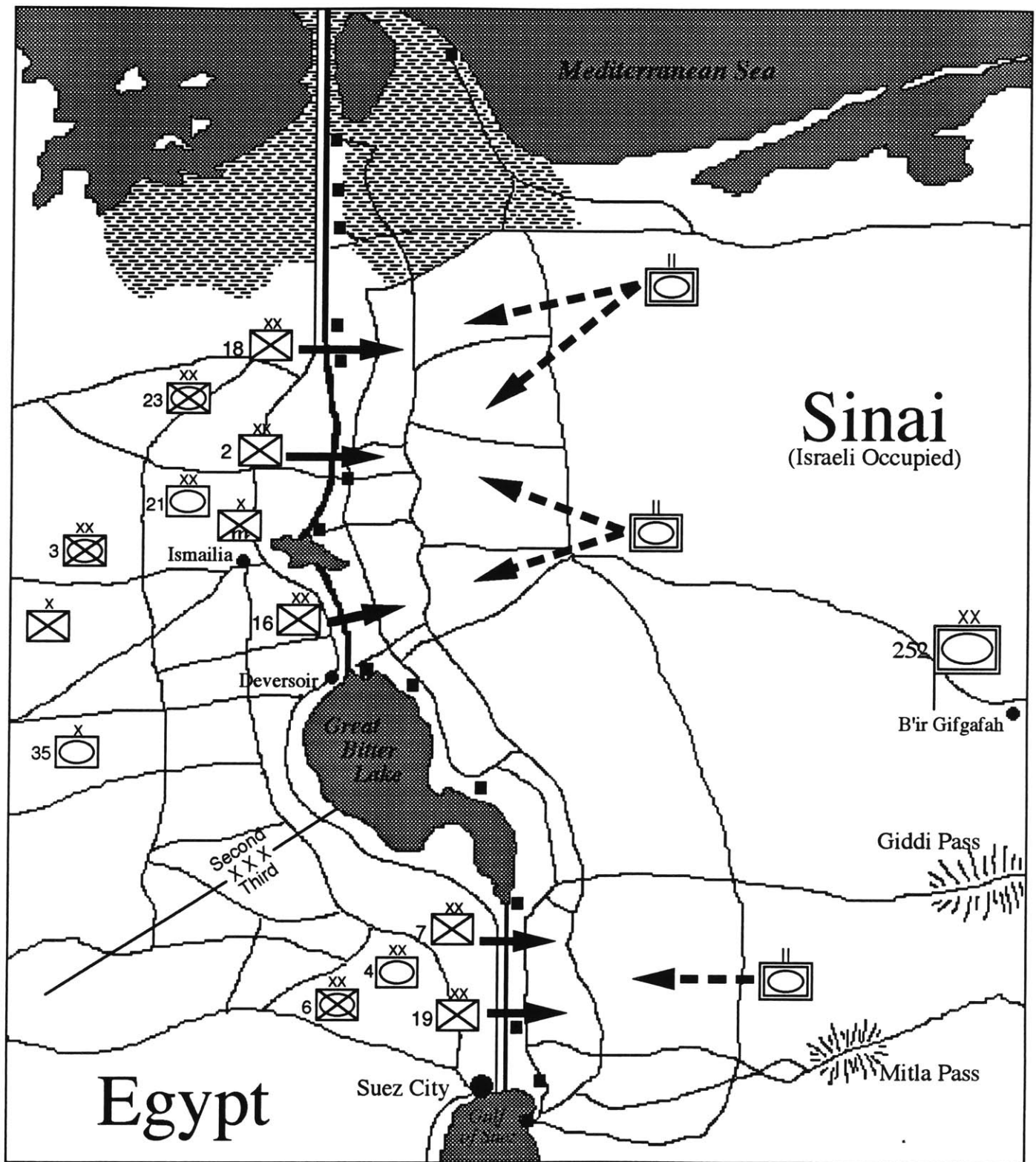
<sup>312</sup> Insight Team, pp. 145-147.

<sup>313</sup> Cited in Insight Team, p. 221.

<sup>314</sup> O'Ballance, *No Victor, No Vanquished*, p. 85; Shazli, 63-68.

<sup>315</sup> Adan, p. 98; Dupuy, pp. 417, 472-473, Gamasy, pp. 209-210, 226-227, 234-235, 241-242; Herzog, *The Arab-Israeli Wars*, pp. 244-246, 247-251; Herzog, *The War of Atonement*, p. 199; O'Ballance, *No Victor, No Vanquished*, pp. 73-82, 96-97, 107; Sharon, pp. 294-296.

# The Egyptian Crossing of Suez, 6 October 1973



- ➡ - Egyptian Attacks, 6-9 October
- ➡ - Israeli Counterattacks, 6-8 October

■ - Israeli Bar-Lev Line Fortifications

AAA. In particular, the Israelis found that to avoid the SA-2s, SA-3s, and especially the unexpected SA-6, they had to stay close to the ground, where they fell prey to anti-aircraft guns. The Israelis lost 14 aircraft during the first two days of the war and had many others damaged, at which point Tel Aviv ordered the IAF to stay clear of the canal for fear of needlessly depleting its air force. For the next several days, Israeli planes played little role in the fighting because of this edict and because they were desperately needed to deal with the simultaneous (and ultimately more threatening) Syrian invasion of the Golan.<sup>316</sup>

Israel's armored forces did no better. The 252nd Armored Division was deployed with one brigade close to the canal, another brigade at about the line of the passes, and the third brigade in central Sinai, and rather than waiting to concentrate the division, they simply raced to the canal and attacked piecemeal. In addition, as Ismail had hoped, because the Egyptian assault came all across the front and no main effort could be identified, the Israelis also dispersed their armor across the entire front. Consequently, for the first two days, the Israeli counterattacks were conducted by penny-packets of Israeli tanks unsupported by infantry, artillery or even air power. The Egyptians fought off these counterattacks extremely well. Their tanks, anti-tank teams, and artillery all coordinated their efforts beautifully. Egyptian artillery fire was extremely accurate. Egyptian infantry equipped with AT-3 Sagger ATGMs and RPGs would camouflage themselves among the sand dunes and allow the Israeli tanks to charge through their positions unhindered only to suddenly pop-up and attack the Israelis from the rear once they had gone by. Additional anti-tank teams as well as armor, APCs, mortars and artillery would then open up on the Israeli tanks from their main lines, catching the Israelis in fire-sacks and hitting them from all sides. Although the Egyptian tank and ATGM fire was actually quite inaccurate, the sheer volume eventually resulted in kills. The Israelis suffered horrendous losses in these attacks, losing nearly 200 of the 252nd Armored Division's 300 tanks in the first two days of the war.<sup>317</sup>

On 8 October, the Israelis attempted a larger counterattack involving two newly-arrived armored divisions--Maj. General Adan's 162nd and Maj. General Sharon's 143rd. This attack failed just as miserably as the smaller assaults the 252nd Division had been conducting during the previous two days. The Israeli counterattack was poorly organized at the front level, commanders throughout the hierarchy made poor decisions during the attack, and it suffered greatly from the fact that the Israelis had not yet figured out how to cope with the new Egyptian tactics. The Egyptians fought fiercely, inflicting heavy casualties on Adan's division and Sharon never even bothered to conduct an attack.<sup>318</sup>

Throughout this period, the moment an Israeli counterattack was beaten back, the Egyptians would resume their creeping advance. Once the army bridgeheads had been locked together, the Egyptians began heading eastward, slowly pushing forward into the hills and sand dunes between the canal and the mountains of western Sinai. However, the offensive soon slowed to a crawl and then to a full halt. The constant Israeli counterattacks had done little damage to the Egyptian formations, but by forcing them to halt their advance and defend in place they had cost the Egyptians precious time. By 8 October, the Israelis had built up to roughly three full armored divisions facing the Egyptians. Of equal importance, individual Israeli commanders had begun to find solutions to the Egyptian tactics. To deal with the Egyptian Saggars and RPGs, Adan for example, deployed APCs with machine guns in support of his tanks to suppress the Egyptian anti-tank fire. Other divisions employed artillery to keep the heads of the Egyptian infantrymen down or smoke to hide Israeli armored vehicles from the Sagger teams. Moreover, the Israelis learned to

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<sup>316</sup> Adan, p. 41; Cordesman and Wagner, p. 73; Dupuy, pp. 418-419, 421, Gamasy, pp. 215, 233-234.

<sup>317</sup> Adan, pp. 25-41, Dupuy, pp. 419-420; Gamasy, pp. 216-218; Herzog, *The Arab-Israeli Wars*, pp. 243, 247-251; O'Ballance, *No Victor, No Vanquished*, pp. 94, 115-117.

<sup>318</sup> Adan, pp. 98, Dupuy, pp. 422-435; Gamasy, pp. 244-247; Herzog, *The Arab-Israeli Wars*, pp. 251-255; O'Ballance, *No Victor, No Vanquished*, pp. 98-106; Sharon, pp. 299-305; Wald, pp. 100-101.



counterattack into the flanks of Egyptian units the moment they began moving forward. Because the Egyptians attacked in schematic fashion and advanced brigade by brigade or division by division, the Israelis found that they could usually find gaps between these units as they tried to advance--gaps into which the Israelis could push armor. Egyptian units almost never countered the Israeli moves with maneuvers of their own, and were incapable of reorienting their forces to deal with these flanking attacks. Instead, the advancing force could only stop and try to return fire until its neighboring unit could be brought forward to drive off the Israelis. Consequently, Egyptian units began to suffer heavier casualties and to advance less and less. In addition, as the Egyptians drove further into Sinai, their artillery fire became progressively less accurate. They also began losing counterbattery duels to Israeli artillery units which had redeployed from their prewar positions to new locations. By 9 or 10 October the advance had been brought to a halt short of Isma'il's goal of the so-called "artillery" road, which paralleled the canal 10-15 kilometers to the east.<sup>319</sup>

The reasons for this halt were not apparent to everyone on the Egyptian side of the canal. On 9 and 10 October, many Egyptian leaders were still intoxicated by their astonishing victories during the previous days, and they tended to attribute the slowing of their advance to the friction that is endemic to all military operations and that eventually brings even the most successful offensives to a halt. Consequently, many members of the General Staff began agitating for a renewed offensive to seize the line of the passes. Shazli and Gamasy apparently both favored such an offensive, even though both knew that plans for such a move--phase II of the original plan--had never made it past the drawing board. Isma'il, however, was adamantly opposed to it. Apparently, he had recognized that Egypt's initial success was due to four crucial factors--surprise, the dramatic imbalance of forces on 6 October, Israeli unpreparedness for Egyptian anti-tank tactics, and the brilliant, all-encompassing script of the General Staff. By 9 October, all four of these advantages were slipping away: the Israelis had recovered from their surprise, they were concentrating forces in Sinai, they were figuring out ways to defeat the Egyptian defensive tactics, and the course of operations was diverging further and further from the plan, forcing local commanders to shoulder more of the burden of command. What's more, there were no detailed GHQ plans for an attack to the passes. For all these reasons, despite constant entreaties from Shazli, Gamasy and others, Isma'il refused to order a new, large-scale offensive but instead ordered his troops to continue consolidating their positions and bracing themselves for renewed Israeli attacks.<sup>320</sup>

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<sup>319</sup> Adan, pp. 118-119, 132, 144-148, 175-214, 221-224, 227-229; Dupuy, pp. 416, 470-471; Herzog, *The Arab-Israeli Wars*, pp. 255-258; Insight Team, p. 169; O'Ballance, *No Victor, No Vanquished*, pp. 98, 109-111, 147-152; Sharon, pp. 310; Wald, pp. 107-110.

<sup>320</sup> Aker, pp. 97-98; Armstrong, p. 148; Dupuy, p. 482; Gamasy, pp. 264-272; Insight Team, p. 296; Neff, p. 214; Shazli, pp. 246-247. Once again, note that while Shazli's account of his own standing in this debate is entirely fabricated, he appears to have represented Isma'il's position fairly (and ascribed it to himself). After the war Isma'il told Mohammed Heikal in an interview that the reason he had not wanted to attack beyond the Egyptian bridgeheads on 9-13 October was that the Egyptians had not moved their SAM units to the east bank and so Egyptian armor would have had to operate without its protective missile umbrella. Gamasy also notes that Isma'il raised this point in argument with his staff at the time. While Isma'il may have believed this, it strikes me as an excuse, rather than a reason. First, as noted above, the memoirs of Gamasy, Shazli, and National Security Adviser Hafiz Isma'il all make it clear that General Isma'il was opposed to any offensive beyond the bridgeheads and had purposely made no plans for the execution of a phase II offensive to the passes, all the while paying lip service to the idea. Second, Egyptian logistical depots remained largely on the west bank. Supplies for a phase II offensive had to be hauled across the canal, a very awkward and time-consuming process. If Isma'il had ever wanted to even preserve the option of making such an attack he almost certainly would have begun shifting supplies to the east bank immediately after the combat units were across, around 8 October. (See S. L. A. Marshall, "Egypt's Two Week Military Myth," *The New Leader*, 12 Nov. 1973, p. 11). Finally, at no point did the Egyptians begin moving SAM units across the canal. A few SA-6 batteries as well as mobile AAA units



### The Egyptian Offensive of 14 October

While Isma'il was able to withstand his subordinates' cries for implementation of the mythical "phase II" offensive, he was unable to overcome pressure from Syria. On 6 and 7 October the Israelis had fought the Syrians to a standstill on the Golan, and on the morning of 8 October, they launched a major offensive on the Damascus plain. The Israelis made rapid progress and threatened to advance on the Syrian capital itself. The Syrians pleaded with the Egyptians to launch a major attack to force the Israelis to shift forces from the Golan to the Sinai front. Sadat, who also appears to have been affected by Egyptian success on 6-9 October, agreed with the Syrians and, despite Isma'il's protests, ordered the General Staff to launch a major attack to the passes to force the Israelis to ease their pressure on Damascus.<sup>321</sup>

The attack was set for 14 October and the Egyptians transferred armored and mechanized forces from their GHQ reserve to the east bank to conduct the assault. The offensive would employ Egypt's two armored divisions, the 4th and the 21st, supported by several additional armored and mechanized brigades from the two field armies and the GHQ reserve. Altogether, they massed 800-1,000 tanks for the operation. The offensive was to be a giant pincer move converging on B'ir Gifgafah. Second Army, led by 21st Armored Division, would strike out eastward and force the B'ir Gifgafah pass, while Third Army, led by 4th Armored Division, would attack to the northeast, drive through the Mitla pass and link up with Second Army on the far side of the B'ir Gifgafah pass. In addition, each army would conduct a supporting attack--Second Army's north toward Romani, Third Army's south toward R'as Sudr--and Third Army would also deploy a blocking force to prevent the Israelis from counterattacking out of the Giddi pass.<sup>322</sup>

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were transferred to the east bank, but most of the SA-6 units and all of the SA-2/3 units remained on the west bank. Again, if Isma'il had even been considering an offensive to the passes he should have begun moving those SAM units immediately, again probably around 8 October. There is one more consideration that should be borne in mind regarding the last two points: the fact that the SAMs and logistics did not begin crossing the canal in large numbers before 10 October (actually they never were transferred in large numbers at all) is a clear indication that such moves were not part of the original Egyptian master plan. If Isma'il had wanted the option of a follow-on offensive to the passes he would have included in phase I all of the preparations necessary to allow for the rapid conduct of a follow-on assault. The fact that he did not include such preparations in the operations order strongly indicates that his SAM excuse was a red herring, and bolsters the impressions of Gamasy, Shazli and Hafiz Isma'il that General Isma'il never intended to go beyond the bridgehead. Indeed, it suggests that General Isma'il may have purposely structured the canal-crossing operation so that it could not go beyond the artillery road. It may be that Isma'il expected to face heavy pressure for an offensive to the passes if the initial canal-crossing went well (this was obvious, Egyptian military and political leaders were pressing for it even before the October War began) and the plans he made may have been deliberately designed to help him head off that pressure with the convenient excuse that the military preparations were not yet in place for a follow-on offensive. I cannot rule out the possibility that Isma'il hoped that at some future point he would be able to conduct another set-piece offensive to the passes, however, the evidence is very compelling that he never intended this operation to follow close-on the heels of the canal-crossing, that it was at least weeks if not months away on his agenda, and that the SAM excuse was just that--an excuse, not a reason.

<sup>321</sup> El Edroos, pp. 506-507; Gamasy, pp. 264-272; Insight Team, p. 296; Neff, p. 214; Shazli, pp. 245-247.

<sup>322</sup> Adan, p. 237; Dupuy, pp. 486, 490; El Edroos, pp. 504-508; Gamasy, p. 277; Herzog, *The War of Atonement*, p. 205; Schiff, pp. 223; Sharon, p. 310. The Egyptian sources offer a different picture of the operation. For the most part, the Egyptian sources claim that no more than four brigades were employed in the offensive. I find this absurd. It strikes me as a deliberate effort to downplay the size of the attack and therefore both its importance and the magnitude of the defeat. Several points lead me to side wholly with the Israeli account on this issue. First, both sides agree on the goals and plan of the attack. Unless Isma'il and Gamasy temporarily lost their minds, they could never have expected four brigades to be able to defeat four Israeli ugdot dug-in in the good defensive terrain of the Mitla and B'ir Gifgafah passes and the hills west of them. While it is true that Isma'il opposed the attack, Gamasy and Shazli did not, and almost

The attack was a complete catastrophe. Egyptian commanders of division-level and below failed to conduct adequate reconnaissance. Consequently, they had only the information provided by senior headquarters regarding Israeli deployments and locations to go on and they were frequently surprised by unknown Israeli defensive positions. Early on 14 October, Israeli commandos landed on Jebel Ataqah and destroyed most of the sophisticated signals intercept equipment the Egyptians had been using to monitor Israeli reporting. With this source gone, the General Staff was forced to rely on the reports of their own troops, and as soon as the battle started to turn sour, these reports quickly diverged from reality. As a result, confusion spread quickly through the Egyptian chain of command and the ability of the General Staff to direct the battle rapidly diminished.<sup>323</sup>

Another problem the Egyptians encountered was that command and control quickly broke down among operational commanders in the field. The Egyptian formations could not keep together and coordinate their operations. Thus what should have been two divisional thrusts with two supporting attacks turned into nine brigade-sized attacks scattered all across the front. The Egyptian columns got so spread out that they could not come to each other's aid as each came under attack from quick, maneuvering Israeli armor. Instead of two reinforced armored-division fists, the Israelis were hit almost randomly by piecemeal tank attacks that they pinned, outflanked, and mauled.<sup>324</sup>

At the tactical level, Egyptian performance was even worse. First, Egyptian

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certainly would have objected if Isma'il had deliberately tried to sabotage the attack (or simply keep losses to a minimum in what he knew would be a doomed assault) by employing a force so small it could not possibly have succeeded. In addition, we know from detailed accounts of this event and from his character as a whole that while Isma'il was not happy about this operation, he fully accepted the notion of civilian control of the military and would never have deliberately executed a mission half-heartedly once it had been specifically ordered by Sadat. Moreover, Isma'il's abiding concern for his troops makes it highly unlikely he would have sent four brigades off on an attack that had no chance of succeeding; it seems far more likely that Isma'il would have organized the best offensive he could in hope that his forces might pull it off, rather than simply sacrificing 4 brigades because he was ordered to conduct a mission he did not favor.

Two additional points bear on this issue. First, both the Egyptians and Israelis agree that the Egyptians lost about 264-267 tanks in this attack. Four heavy brigades would have deployed about 300-400 tanks, thus 265 tanks would have constituted 66-88 percent losses. Such loss rates are astronomical. Even in the worst defeats, it is exceedingly rare for one side to suffer greater than 50 percent casualties. Especially in this case where the Egyptians were not enveloped by an operational-level Israeli maneuver, but in fact broke off the attack only a few hours after it had begun, it is very hard to swallow such extraordinary losses. For the sake of comparison, in the worst Iraqi attacks against the Israeli forces south of Damascus during the October war--attacks in which the Iraqis fought ferociously, launched repeated attacks, and were outflanked and enveloped by operational-level Israeli maneuvers--the Iraqis still never took more than about 50 percent casualties. And the Iraqis were considered far more inept than the Egyptians.

Finally, the Egyptian accounts are remarkably vague and surreal when describing the events on 14 October. In marked contrast to their detailed descriptions of the canal-crossing operation and the debate over whether to attack to the passes, Egyptian accounts of the fighting on 14 October are brief and impressionistic. This too strongly suggests a desire to downplay or even mislead their audience as to the actual events on 14 October. By contrast, the Israeli accounts are highly detailed, logically consistent, and also are consistent with the larger context of events. (A good example of this contrast is the difference in descriptions presented by Badri et. al., pp. 97-98 and Adan, pp. 232-242. Adan was one of the Israeli *ugdah* commanders in the battle and his memoirs are scrupulously objective, even to the point of criticizing his own actions.)

<sup>323</sup> I am indebted to Barry Posen for drawing my attention to this issue. See Dupuy, pp. 346, 553; and Colonel Dupuy's question to General David Elazar, in Louis Williams ed. *International Symposium on the Military Aspects of the Arab-Israeli Conflict*, (Tel Aviv: University Publishers, 1975), pp. 251-260. Also see, Aker, p. 108; O'Ballance, *No Victor, No Vanquished*, p. 298; Heikal interview with Isma'il, p. 224.

<sup>324</sup> Adan, pp. 232-242; Aker, pp. 99-100, 108; Dupuy, pp. 486-491; El Edroos, p. 508; Gamasy, pp. 276-280; Heikal, *The Road to Ramadan*, p. 231; Herzog, *The War of Atonement*, pp. 205-206; Herzog, *The Arab-Israeli Wars*, pp. 260-261; Insight Team, pp. 294-298; O'Ballance, *No Victor, No Vanquished*, pp. 158-159, 165-166; Sharon, pp. 310-311.

company, battalion, and brigade commanders failed to conduct proper combined arms operations. For the most part, mechanized infantry went into battle close behind the tanks but, as per Soviet doctrine of the time, they never bothered to dismount and large numbers were killed without making any contribution to the attack when Israeli tank rounds destroyed their APCs. In particular, the Egyptians did not have their infantry dismount, push ahead of the tanks and break-up the Israeli armor concentrations with their ATGMs and RPGs as they had done so effectively on 6-10 October. Egyptian artillery tried to lay down a covering barrage, and also tried to provide fire-support to Egyptian units in trouble, but simply could not. Trevor Dupuy observed that, "Without detailed, prearranged fire plans, such as those they had employed on October 6, the Egyptian artillery concentrations fell largely on empty rock and sand dunes."<sup>325</sup> Egyptian armor attacked Soviet-style in waves, but unlike the Soviets, the Egyptians made no effort to maneuver in battle. The Egyptian T-55s and T-62s literally drove straight at the Israelis and tried simply to overwhelm them with firepower. The Israeli tankers constantly maneuvered--both individually and in units--against the Egyptian attacks and inflicted terrific damage on them.<sup>326</sup> Brigadier S. A. El Edroos, himself no critic of the Arab militaries, stated as a postscript to the 14 October battle, "The catastrophic defeat suffered by the Egyptian tank corps reflected the inability of Egyptian commanders, from divisional to troop [company] level, to conduct mobile, flexible, and fluid armored operations."<sup>327</sup>

Soon after the attack began, the Egyptian offensive came to a halt only a few miles from their start lines. The Egyptians took at least 1,000 casualties and lost about 265 tanks and 200 other armored vehicles.<sup>328</sup> All of this equipment was lost forever because the Israelis held the field and the Egyptians mostly failed to recover their crippled armor. The Israelis took only minor casualties and had less than 40 tanks put out of action, of which only 6 could not be quickly repaired and returned to battle.<sup>329</sup>

### **The Israeli Counteroffensive**

The Israelis immediately followed up their success on 14 October with a major counteroffensive against the Egyptians. The Egyptian Second Army had failed to secure its right flank on the Great Bitter Lake, and had left a gap near Deversoir between its lines and the lake. The Israelis had discovered this gap several days before, and on the night of 15 October they launched a multi-division operation to push through this seam and cross over to the west bank of the canal where they intended to drive south and tear up the rear of the Egyptian Third Army. Sharon's 143rd Division (reinforced with a brigade of paratroopers) attacked into the breach between the Second Army and the Great Bitter Lake. Sharon's forces were to drive the Egyptian forces northward to widen the corridor to the canal, then cross over and secure a bridgehead on the west bank, at which point, the 162nd and reconstituted 252nd Armored Divisions--under Generals Adan and Magen respectively--would cross over and drive south.<sup>330</sup>

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<sup>325</sup> Dupuy, pp. 488-489.

<sup>326</sup> Adan, pp. 232-242; Aker, pp. 99-100; Dupuy, pp. 486-491; El Edroos, pp. 508-509, 537; Gamasy, pp. 276-280; Herzog, *The War of Atonement*, pp. 205-206; Herzog, *The Arab-Israeli Wars*, pp. 260-261., 275; Insight Team, pp. 294-298; O'Ballance, *No Victor, No Vanquished*, pp. 158-159, 165-166; Sharon, pp. 310-311.

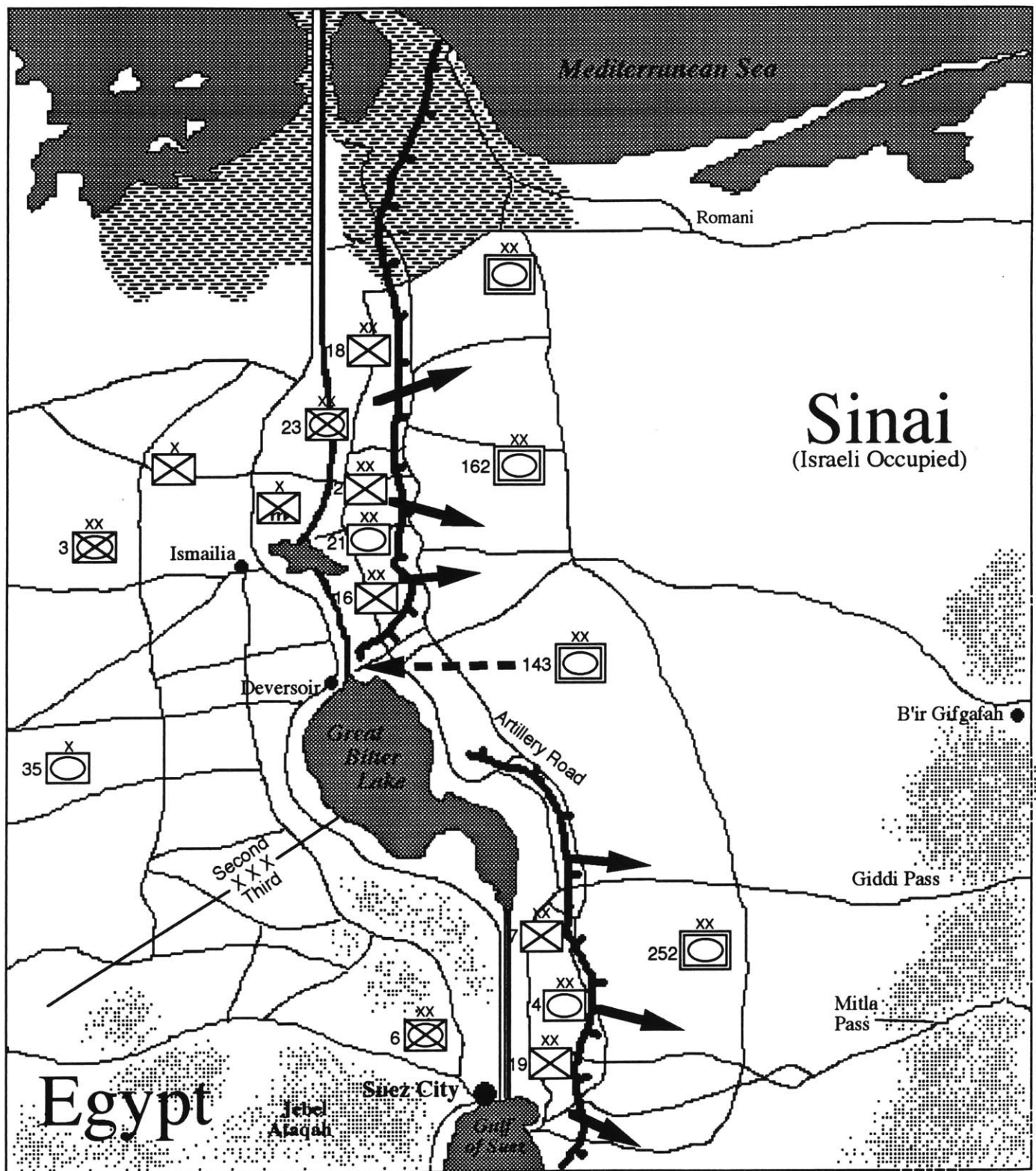
<sup>327</sup> El Edroos, p. 508.




<sup>328</sup> Aker, p. 100; Dupuy, p. 487; El Edroos, p. 508; Gamasy, p. 277; O'Ballance, *No Victor, No Vanquished*, p. 165.



<sup>329</sup> Dupuy, p. 487.

<sup>330</sup> Adan, pp. 252-262; Dupuy, pp. 480-481, 492-496; Herzog, *The Arab-Israeli Wars*, pp. 256-259, 262-263; O'Ballance, *No Victor, No Vanquished*, pp. 221-225; Sharon, pp. 310-313.

## Egypt's 14 October Offensive and Israel's Attack Toward Suez



-  - Unsuccessful Egyptian Attacks, 14 October
-  - Israeli Crossing of Suez, 16 October
-  - Extent of Egyptian Bridgehead, 14 October

-  - Egyptian Units
-  - Israeli Units

The southern flank of the Egyptian Second Army was anchored on very extensive defensive positions built in and around the so-called "Chinese Farm."<sup>331</sup> When Sharon's forces pushed up from Deversoir on the night of 15/16 October, they encountered little resistance because the Egyptians had not even thought to place observation posts between the Chinese Farm positions and the Great Bitter Lake. As a result, Sharon's paratrooper brigade crossed easily and dug-in on the west bank of Suez. Similarly, when Sharon sent an armored brigade north along the east bank of the canal they did not encounter any Egyptian flank guards and were able to turn east and attack into the rear of the Chinese Farm defenses. Indeed, Sharon's armor was able to attack into the midst of the headquarters and vehicle park of the Egyptian 16th Infantry Division. Much of the remnants of the Egyptian 21st Armored Division also was in this area, regrouping and patching their wounds after the failed 14 October offensive. Initially, the Egyptians were completely surprised by the sudden appearance of Israeli armor in their rear, however, there were huge numbers of Egyptian troops and armored vehicles everywhere and they soon overcame their shock and began to fight back ferociously.<sup>332</sup>

Over the next 3-4 days a fierce battle took place around the Chinese Farm. Most of the Israeli commanders wanted to widen their corridor to the canal and so fought to push the Egyptians out of their dug-in defensive positions. General Sharon, however, believed it far more important to expand the bridgehead on the west bank and appears to have wanted the glory of leading the breakout on that side, rather than the crucial--but less flashy--task of holding open the bridgehead on both sides of the canal. As a result, Sharon never committed all of his forces in a determined attack to push the Egyptians out of the Chinese Farm. Nevertheless, the Egyptian defense was still very impressive. The Egyptians fought extremely hard to hold on to their defensive positions and caused significant casualties every time the Israelis attacked, although they made little effort to counterattack. At the tactical level, Egyptian forces were willing to counterattack to retake a specific position recently lost to the Israelis, but were not willing or able to counterattack to improve their position overall, to unhinge the Israeli offensive more broadly, or to simply relieve the constant pressure on their positions. Of greater importance still, despite the concentration of combat power in the area, none of Cairo's field commanders on the scene moved to conduct an operational level counterattack to try to cut off the narrow Israeli corridor to the canal. Meanwhile, Egyptian commanders on the west bank refused to report the actual size of the Israeli force that had crossed the canal. Throughout 16 and 17 October, as the Israelis built up their strength on the west bank to several brigades, Egyptian officers reported to the General Staff that the Israeli units on the west bank were no more than a raiding force of less than a company.<sup>333</sup>

Based on these misleading reports, the General Staff concluded that the forces on the west bank were a diversion and the Israelis real objective was to take the Chinese Farm position and then roll up the Second Army positions on the east bank from south to north. They regarded this as a serious threat, and so on 16 October, Isma'il ordered a major counterattack on the east bank by the Second and Third Armies to try to crush the Israeli force (Sharon's *ugdah*) that had gotten into the right flank of the Second Army. Isma'il ordered 21st Armored Division to counterattack southward while the T-62-equipped 25th Independent Armored Brigade of the Third Army drove north along the Bitter Lakes to hit the Israelis from the rear.<sup>334</sup>

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<sup>331</sup> Actually a Japanese experimental farm, however, the Israeli soldiers who captured it in 1967 could not tell Japanese writing from Chinese, hence the name.

<sup>332</sup> Adan, pp. 263-270; Dupuy, pp. 497-501; Herzog, *The Arab-Israeli Wars*, pp. 263-271; O'Ballance, *No Victor, No Vanquished*, pp. 225-230; Sharon, pp. 313-317.

<sup>333</sup> Adan, pp. 264-300; Dupuy, pp. 503-508; Gamasy, pp. 284-285; Heikal, *The Road to Ramadan*, p. 236; Herzog, *The Arab-Israeli Wars*, pp. 271-272; O'Ballance, *No Victor, No Vanquished*, pp. 228-232; Sharon, pp. 317-330.

<sup>334</sup> Adan, pp. 290-303; Dupuy, pp. 506-508, 510-511; Gamasy, pp. 288-289; Herzog, *The Arab-Israeli*

The counterattack came on 17 October and its execution left much to be desired. First, the Egyptian field commanders again failed to adequately scout their attack and so were not aware that Adan's 162nd Division had been brought down to clear the Chinese Farm position and then cross the canal. Second, the 21st Division and 25th Armored Brigade could not coordinate their attacks so that Adan was able to defeat the 21st Armored Division attack and then hurry south to deal with 25th Armored Brigade. Third, the Egyptian armored units showed the same problems they had manifested on 14 October: they launched clumsy frontal assaults, failed to maneuver, showed no imagination or flexibility when Adan's units caught them from the flank or rear, and totally neglected combined arms operations. The 21st Armored Division's attack quickly went nowhere and after losing 50-60 tanks to the Israelis, they retired. Adan then turned south to deal with the 25th Armored Brigade. This unit was driving north along the Great Bitter lake in an administrative march formation with no flank guards. Adan set up an ambush with his tanks in front and along the right flank of the advancing Egyptians. He then hit the Egyptians with his entire division from two sides. The Egyptian tanks that were not obliterated by Israeli long-range gunnery in the first few moments were quickly dispatched when the Israeli tanks moved down and engaged them at close quarters. Of 96 T-62s in 25th Armored Brigade, Adan destroyed all but ten as well as all of the brigade's APCs while losing only three of his own (two to an old Israeli minefield.)<sup>335</sup>

After the failure of the 17 October counterattacks, on 17-19 October, the Egyptian General Staff slowly became aware of the true size of the Israeli force on the west bank, and concluded that this was a full-scale counteroffensive rather than a raid. Soviet Premier Kosygin arrived in Cairo on 17 October and, either late that night or early on 18 October, showed Sadat Russian satellite imagery of the Israeli units operating on the west side of Suez.<sup>336</sup> Isma'il apparently was livid when he learned of the actual size of the IDF force on the west bank. He decided he could not trust his field commanders and so he and Sadat decided to send Shazli to the front to find out exactly what was going on. Late on the 18th or early on the 19th, Shazli confirmed that the Israelis had crossed at least a division to the west bank and clearly intended to launch a major offensive.<sup>337</sup> Isma'il ordered two armored brigades--one from each field army--to return to the west bank to help contain the Israeli bridgehead.<sup>338</sup> After Shazli returned from the front on 20 October, the General Staff debated what course of action they should adopt. Shazli recommended withdrawing most of the remaining armor on the east bank to the west bank and then counterattacking the Israeli force and destroying it. Isma'il, on the other hand, argued that Egypt should accept an immediate cease-fire to freeze the Israeli force politically before it pushed any further into Egypt. He specifically argued against any withdrawal of forces from the east bank because he feared it would cause a collapse of Egyptian morale and would lead to the loss of the hard-won and politically crucial bridgeheads on the east bank. Sadat eventually agreed with Isma'il, and began efforts to work out a cease-fire with Syria and Russia in the United Nations.<sup>339</sup>

In the meantime, the Israelis had begun their offensive on the west bank of the canal. Sharon finally got permission to try to move north to threaten or even cut off the Egyptian Second Army, but although he was able to push to the outskirts of Ismailia, his

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*Wars*, pp. 272-275; Neff, p. 244.

<sup>335</sup> Adan, pp. 290-303; Dupuy, pp. 506-508, 510-511; Gamasy, pp. 288-289; Herzog, *The Arab-Israeli Wars*, pp. 272-273; Neff, p. 244; O'Ballance, *No Victor, No Vanquished*, pp. 232-235.

<sup>336</sup> Adan, pp. 311-312, 332; Heikal, *The Road to Ramadan*, p. 241; O'Ballance, *No Victor, No Vanquished*, pp. 242, 253; Schiff, p. 224.

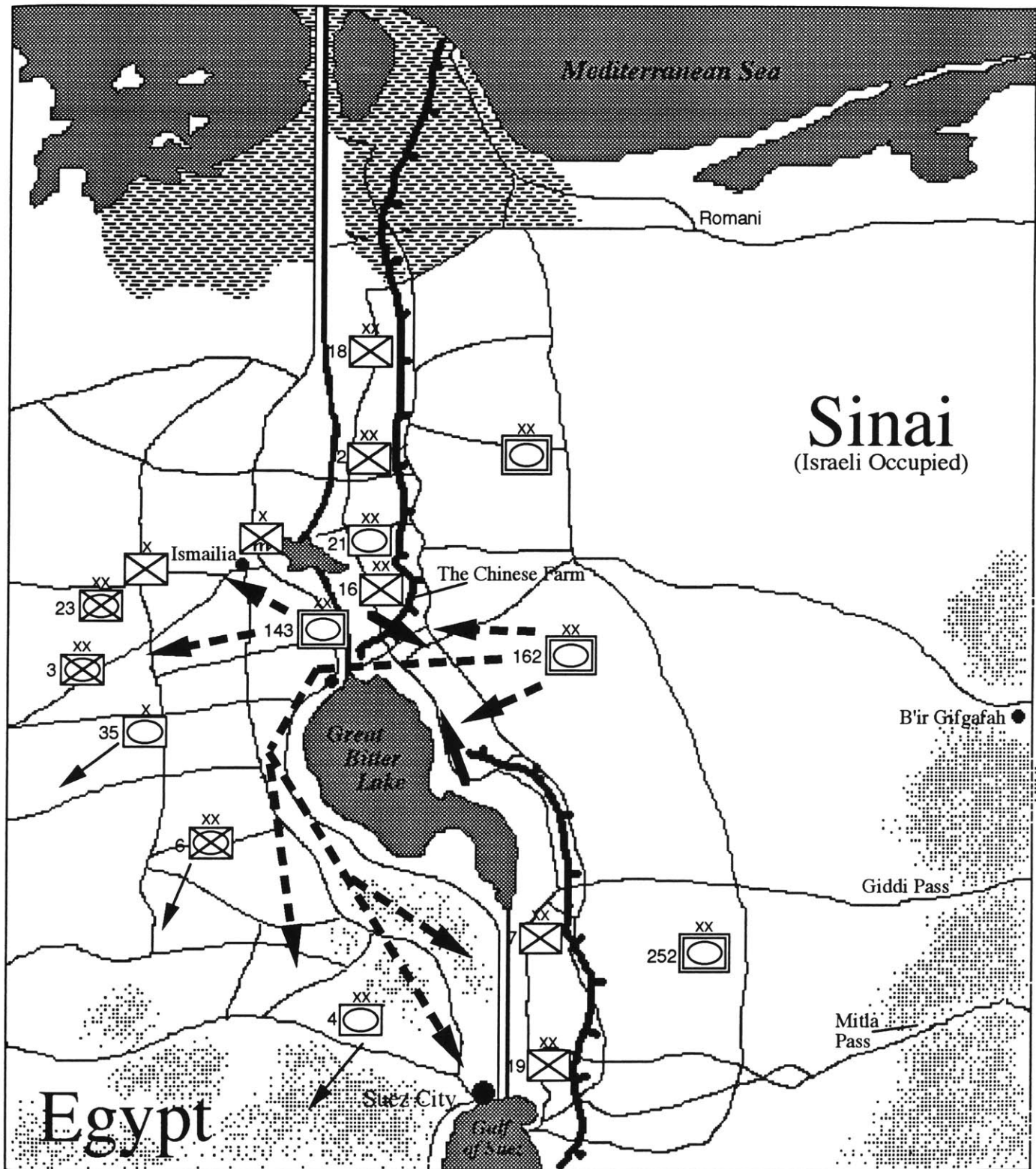
<sup>337</sup> Adan, p. 330; Dupuy, p. 517; Gamasy, p. 290.






<sup>338</sup> Dupuy, pp. 517-518; Gamasy, p. 290.

<sup>339</sup> Adan, pp. 330-331; Dupuy, pp. 518-520; Gamasy, pp. 291-292; O'Ballance, *No Victor, No Vanquished*, p. 245.



# Israeli Operations on the West Bank of Suez, 17-24 October 1973



-  - Unsuccessful Egyptian Counterattacks, 17 October
-  - Israeli Attacks, 17-24 October
-  - Egyptian units retreating
-  - Egyptian Units
-  - Israeli Units

division was stopped there by strong resistance from Egyptian commandos and infantry dug-in around the city. Adan on the other hand, beat back several determined but very inept counterattacks by Egyptian armored and mechanized reserves on the west bank before punching through their hastily formed lines and driving south into the Geneifah Hills. Initially the Israelis had only Adan's one understrength division with about 200 tanks for the drive south (later, Adan was joined by Magen's even smaller division) while the Egyptians had almost four fresh, full strength heavy divisions to oppose them. Nevertheless, the Israelis beat them decisively in a series of engagements. By 22 October, Adan had completely encircled the Third Army and his forces stood at the gates of Suez City.<sup>340</sup>

The Israelis noted that the Egyptians fought considerably worse on the west bank than they had on the east bank. In particular, their defensive battles were not as determined or as skillful, while they experienced all of the same problems with inflexibility, lack of initiative and inability to maneuver in tank battles with the Israelis. As the Egyptian defenses collapsed, the levels of deception and obfuscation from Egyptian tactical formations increased dramatically and the Egyptian forces on the west bank quickly descended into confusion and paralysis.<sup>341</sup> Egypt's senior leadership scrambled to try to patch together a defense to stop the Israeli advance, but they were hamstrung by the passivity and obfuscation of their subordinates.<sup>342</sup> On one occasion, the commander of the Egyptian 4th Armored Division would not accept an order from the Third Army commander to counterattack the Israelis and it had to be reissued by Isma'il himself.<sup>343</sup> In another instance, an Egyptian brigade commander repeatedly lied to the Third Army commander that he was counterattacking the Israelis when in fact his forces had never moved from their positions.<sup>344</sup> The Egyptians also were hampered by the fact that the Israeli Air Force finally was able to commit itself fully in these battles. First, with the Syrian front largely quiescent, the IAF could concentrate its assets on the Suez front. Second, as the Israeli ground forces moved on the west bank they went out of their way to overrun Egyptian SAM sites, creating a gap in the Egyptian air defenses in which the IAF could operate freely. Cairo desperately threw in its air force to seal this breach and to stop the Israeli armor, flying as many as 2,500 sorties in less than a week. But Israeli fighters made short work of the Egyptians in several major air-to-air engagements, shooting down over 100 Egyptian aircraft for the loss of only 3 of their own.<sup>345</sup>

In the early morning hours of 24 October, Adan sent part of his division to try to take Suez City. Many troops and even whole units of the Egyptian Third Army had retreated into Suez City and when the Israelis drove in they were met with a sharp rebuff. The Egyptians fought desperately, cutting off one small Israeli unit that got separated from the main body and nearly destroying it. General Adan quickly decided that taking the city would entail significant losses and was unnecessary given that the Third Army already was cut off and holding Suez City would not improve the Israeli position significantly. With Tel Aviv's consent he called off the attack, ending the last battle of the war (although the war did not formally end until 28 October). Israel bowed to heavy superpower pressure and gave the Egyptians the cease-fire they had been seeking since 20 October.<sup>346</sup>

<sup>340</sup> Adan pp. 271-274, 308-323, 325-329, 345-399; Dupuy, pp. 513-516, 523-528; Herzog, *The Arab-Israeli Wars*, pp. 276-278, 279-282; Neff, p. 262; O'Ballance, *No Victor, No Vanquished*, p. 264.

<sup>341</sup> Adan, pp. 271-399; Dupuy, pp. 517; El Edroos, pp. 504, 509-511; Neff, p. 262; Insight Team, p. 377.

<sup>342</sup> Adan, pp. 381, 384-385, 387-388, 390-392; El Edroos, p. 510; Insight Team, p. 377.

<sup>343</sup> Adan, pp. 390-391.

<sup>344</sup> Adan, p. 388. Both of these stories are derived from Israeli communications intercepts at the time.

<sup>345</sup> Adan, pp. 386-387, 391-392; Cordesman and Wagner, p. 93; Dupuy, pp. 514-515, 552; Gamasy, p. 290; Herzog, *The Arab-Israeli Wars*, pp. 276-277; Insight Team, p. 376.

<sup>346</sup> Adan, pp. 400-425; Dupuy, pp. 538-543; Gamasy, pp. 298-299; Herzog, *The Arab-Israeli Wars*, pp.



## The War in the Air

Sadat, Isma'il 'Ali and Mubarak all concluded long before 6 October 1973 that the Egyptian Air Force was no match for the IAF, and would not be for the foreseeable future. Egyptian air strategy for the October War was built around this central assumption. First, the EAF was almost completely relieved of counterair missions. With the exception of the airstrikes against a few Israeli airfields in Sinai, there would simply be no Egyptian offensive counterair effort. In particular, Cairo ruled out offensive fighter sweeps over Israeli lines. Similarly, the defensive counterair mission would be left mostly in the hands of Egypt's ground-based air defenses. Cairo did set up some combat air patrols deeper in Egypt, however, these were all either in unimportant sectors, or else as final lines of defense behind the SAM belts. Wherever it was important for the Egyptians to keep out the IAF, the mission fell to the SAMs and AAA. The ground-based air defenses provided all air defense coverage over Egyptian ground forces on both sides of the canal, as well as the barrier defenses to prevent Israel from conducting deep penetration raids against strategic targets such as Cairo. In addition, the Egyptian generals concluded that they could expect only very limited support to their ground forces in the form of CAS/BAI missions, and so instead planned to rely on artillery, mortars, and rocket fire.<sup>347</sup>

While the EAF's role was to be very restricted, it would not be completely inactive. Isma'il, Gamasy, and Mubarak assigned Egypt's pilots limited missions that would be well within their capabilities and that would give them the greatest chance of successfully conducting their mission and then escaping before they could be intercepted by IAF fighters. Thus Egyptian aircraft would conduct very quick hit and run raids against specific Israeli targets near the canal zone and then immediately return to base. This effectively ruled out both true CAS missions--which require aircraft to loiter overhead until they are called on by the ground commander--and any interdiction missions deeper than the forward enemy positions.<sup>348</sup>

Even with such minimal goals, EAF performance can hardly be described as anything more than mediocre. As noted above, the initial airstrikes against the Sinai facilities caused little damage and were quickly intercepted by Israeli fighters, resulting in the rapid loss of 10-20 percent of the attacking force, and prompting Cairo to abort the planned second wave. For the next 10-14 days of the war, the EAF did not hinder the war effort, but neither did it contribute very much. The Egyptians staged quick hit-and-run strikes against well-identified Israeli positions. These attacks were annoying to the frontline Israeli forces, but did little damage. Egyptian air-to-ground skills were poor and showed only haphazard planning and support. Air force command and control was rigid, and highly compartmentalized with the result that Egyptian air power was not very flexible or responsive to the changing battle conditions. In particular, because the EAF refused to loiter over the battlefield, they could not come to the aid of Egyptian troops meeting Israeli resistance, and airstrikes really could only be conducted against targets that were in place and identified by the Egyptians at least 24 hours ahead of time, which was about how long it took for the strike request to filter up through the chain of command and then the orders to filter back down to the squadron.<sup>349</sup>

Egyptian air-to-air performance was no better. There were 52 major dogfights between the Egyptians and Israelis. In all, the Egyptians succeeded in shooting down 5-8

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282-283; O'Ballance, *No Victor, No Vanquished*, pp. 277-306.

<sup>347</sup> Cordesman and Wagner, p. 86; Dupuy, pp. 548-549; El Edroos, p. 492; Heikal interview with Isma'il, p. 222; O'Ballance, *No Victor, No Vanquished*, pp. 277-306; Shazli, p. 19.

<sup>348</sup> Cordesman and Wagner, p. 86; Dupuy, pp. 548-549; Heikal interview with Isma'il, p. 222; Shazli, p. 19.

<sup>349</sup> Adan, p. 81; Badri et. al., p. 61; Cohen, pp. 337-339; 345-346; Cordesman and Wagner, pp. 86-97; El Edroos, p. 505; O'Ballance, *No Victor, No Vanquished*, pp. 292-306; Palit, pp. 64-65.

Israeli aircraft while losing 172 of their own aircraft to Israeli fighters.<sup>350</sup> As these figures imply, the Egyptians were completely outclassed by the Israelis. While it is true that the Israelis possessed the state of the art Phantom F-4E which was a generation ahead of Egypt's MiG-21s, it is also the case that the Israelis generally reserved the Phantoms for strike missions and the Mirages flew the lion's share of counterair missions (65-70 percent of all counterair sorties). Thus the majority of air-to-air battles involved the same combination of planes as in 1967, although both the Egyptian MiG-21s and Israeli Mirages had been upgraded in the interim. In these battles the Egyptians did even worse than they had in 1967, demonstrating that pilot skill was the dominant factor, not technology. In 1967, the Egyptians had suffered from about a 1:10 kill ratio to the Israelis, while in 1973 this ratio fell to somewhere between 1:12 and 1:30, and probably was right around 1:20. While IAF pilot skills continued to grow, the Israelis found little improvement among their Egyptian counterparts. As in 1967, Egyptian pilots were inflexible, dogmatic, and slow to react in combat. They stuck closely to doctrinal maneuvers, were heavily reliant on their ground controllers, and panicked when Israeli pilots took unexpected actions or busted up their textbook formations. As a result, when Israeli and Egyptian fighters did tangle, the Egyptians were virtual sitting ducks for the Israelis.<sup>351</sup> For example, in one battle on the first day of the war, 2 Phantoms took on a strike package of 28 MiG-21s and MiG-17s near Sharm ash-Shaykh, and in a few minutes of dogfighting the Israelis had shot down 8 MiGs and chased off the other twenty with no losses.<sup>352</sup>

The Egyptians again suffered from a low operational readiness rate which diminished their ability to put aircraft in the air. Because of poor maintenance and repair practices, only about 65% of the Egyptian fighter force was operationally ready for combat. Overall, the Egyptians managed less than 7,000 sorties from 500 combat aircraft, or about 0.7 sorties per day per aircraft. By contrast, the Israelis averaged nearly four sorties per day per aircraft.<sup>353</sup>

At one level, Egypt's ground-based air defenses were highly effective in keeping the Israeli Air Force from seriously disrupting Egyptian ground operations until late in the war. However, at another level, they were terribly ineffective in doing this. Specifically, Egyptian forces probably should have caused far more harm to the Israelis than they actually did. Egyptian SAM and AAA operators had only a limited understanding of their weapons and their aim was often rotten. Ultimately, the Egyptians attempted to compensate for their inefficiency by launching masses of SAMs and concentrating entire battalions of anti-aircraft guns on Israeli aircraft. The Egyptians probably shot down about 20-25 Israeli aircraft with SAMs and another 15-20 with AAA.<sup>354</sup> Given that the Israelis

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<sup>350</sup> Cohen, pp. 387-390; Cordesman and Wagner, pp. 85-91; Dupuy, p. 554; Herzog, *The War of Atonement*, p. 259. Numbers of Israeli aircraft shot down in dogfights remains very unclear. Most sources agree that Egypt and Syria combined shot down 6 Israeli aircraft. However, as both Dupuy and Cordesman and Wagner note, probably a few of the 20 or so Israeli aircraft lost to "unknown causes" probably were shot down in air-to-air combat, so the "true" number is probably closer to 10 or 15. There seems to be general agreement among the various sources that there were slightly more air-to-air engagements over Syria than over Egypt, although we have no way of knowing how many planes participated in each of these engagements, or if dogfights over Syria on average involved the same number of planes as participated on average in the air battles over Egypt. Thus relying only on the fact that there were slightly more dogfights fought with the Syrians, that the Syrians and Egyptians were about equal in terms of pilot skills, and assuming that on average the engagements involved the same numbers of aircraft, I estimate that the Egyptians probably killed slightly fewer Israeli planes than did the Syrians.

<sup>351</sup> Cohen, pp. 331-337, 351, 354, 374-379, 384-387, Cordesman and Wagner, pp. 85-90; Dupuy, pp. 554-555; O'Ballance, *No Victor, No Vanquished*, pp. 292-306; Yonay, pp. 318-320, 354-355.

<sup>352</sup> Cohen, pp. 333-336.

<sup>353</sup> Cordesman and Wagner, pp. 73, 85-87; Dupuy, pp. 549-550, 606.

<sup>354</sup> I derived the approximate numbers of Israeli aircraft downed by Egyptian SAMs and AAA as follows. First, the Israelis flew slightly more than half of all their sorties against Egypt. Second the Egyptians had

flew about 6,000 sorties against the Egyptians, this translates into a loss rate of only .006-.0075 per sortie. A very poor attrition rate from the Egyptian perspective. The Egyptians fired about 1,000 SAMs of all types, thus on average, they expended about 40 SAMs for every aircraft shot down.<sup>355</sup>

### **General Observations on Egyptian Military Effectiveness During the October War**

The striking feature of Egyptian combat performance in the October war was the dramatic difference between the skill of their operations during the first three or four days of the campaign and the ineptitude of their efforts thereafter. During the initial Egyptian offensive, the Israelis were amazed at their performance and believed that the Egyptians had somehow completely reformed their army so that all of the old problems had been extirpated. Egyptian operations were crisp and determined. Combined arms cooperation was superb. Tactics were clever and effective, and each attack followed quickly on the heels of the last. It was as if the Israelis were fighting a completely different enemy.

By the fourth or fifth day of the war, however, this facade had begun to crumble. The old patterns of behavior began to reemerge. Actions became sluggish and tentative. Golden opportunities were repeatedly squandered by tactical commanders who never even thought to act on them. Tactical maneuver and creativity vanished. Division-level and lower commanders failed to continue employing the highly effective tactics that had brought such success during the first days of the war and instead reverted to simplistic practices that the Israelis easily defeated. Especially after the loss of the Jebel Ataqah signals intercept site, confusion mounted throughout the chain of command as field commanders increasingly misled their superiors about their actual situations. Combined arms cooperation broke down completely, so much so that on 14 October, Egyptian commanders failed to properly employ infantry to support their armored assaults despite having repeatedly witnessed the destruction their combined arms operations had inflicted on Israeli tanks when they had attacked without infantry support during the previous eight days.

#### *Strategic Competence*

This remarkable contrast in performance clearly reflects the importance of both the General Staff's planning and the constant rehearsal of the initial Egyptian offensive to Cairo's early successes. Nasser and Sadat's depoliticization of the military and their conscious effort to promote the most competent officers regardless of their political sentiments resulted in very capable leadership at the senior levels of the Egyptian military. The plans drawn up by Isma'il, Gamasy, and their subordinates on the GHQ were superb. It is very difficult to find fault with any part of the canal-crossing operation or the push to consolidate the bridgeheads. This is especially true when one recognizes the limited materials with which the Egyptian high command had to work.

Most other Egyptian strategic decisions were similarly commendable. First the decision to stop the advance short of the passes clearly was the right one. This is demonstrated by the disastrous failure of the 14 October attack when Sadat overruled Isma'il's plea to not advance beyond the initial bridgeheads. Second, when the Israelis launched their counteroffensive and Cairo was led to believe that this was an operation to

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a larger and more extensive air defense network than Syria. Third, most sources agree that 40-45 Israeli aircraft were shot down by SAMs during the war and another 30-35 by AAA. Based on the greater number of sorties flown against Egypt and the more extensive SAM network, and assuming that Egyptian and Syrian air defense crews were about equal in terms of skill, I estimated that slightly more than half of all Israeli losses to ground-based air defenses were on the Egyptian front. I did not weight the losses more heavily in Egypt's favor because on the first 2-3 days of the war the Israelis made a determined effort to destroy the Syrian SAM network by airstrikes--which resulted in a significant number of aircraft losses--but made no such effort against Egypt.

<sup>355</sup> Cohen, p. 390; Cordesman and Wagner, pp. 73-94; Dupuy, pp. 550-556, 609; Insight Team, 188-189.

roll up the Second Army positions along the east bank by the false reporting of its subordinates, the General Staff put together a major counterattack to catch the Israelis between two powerful armored forces and seal the breach in their lines. Finally, when the Egyptian high command realized that the Israelis actually were across the canal in force and were threatening to completely outflank one or both of Egypt's field armies, both of the positions advanced in the General Staff debate--withdraw armor from the east bank and counterattack, or work for a political settlement--were entirely reasonable alternative courses of action. Isma'il appears to have ultimately been correct that once the Israelis had broken out on the west bank, Egypt's best course of action was a diplomatic cease-fire. Although this led to some anxious moments in Cairo while Third Army was surrounded and it was unclear that Israel would abide by the terms of the truce, in the end the gamble paid off and the Israelis withdrew from Sinai. Given Isma'il's uncanny understanding of his troops, there is every reason to believe that a return of the armor to the west bank would have resulted in a collapse on the east bank as he predicted. Moreover, since the Israelis almost certainly would have defeated that armor on the west bank, the Egyptians would have been worse off than they had been before 6 October if they had withdrawn their forces to fight the Israelis on the west bank. In short, Cairo appears to have opted for the better of two good strategies.

### *Tactical Incompetence*

The ineptness of Egyptian tactical operations after about 10 October indicates that Egypt's earlier successes were the product of the General Staff's planning and the constant practicing of that plan, rather than any newly-developed skills among Egyptian junior officers. In particular, the fact that combined arms coordination disappeared after 10 October and that Egyptian tactical commanders suddenly stopped employing the tactics that had given the Israelis fits for the past five days indicates that the Egyptians had not internalized these concepts but simply were implementing well-rehearsed operations. The Egyptians displayed good combined arms operations, clever tactical approaches, crisp timing, and effective maneuver at first because all of these elements had been written into the elaborate orders prepared by the General Staff for every unit. These orders were transmitted to the army in the form of simple, straitforward tasks that did the work of integrating the combat arms without any conscious thought required on the part of those executing the plan. But no such planning had been possible for the 14 October offensive, or for the counterattacks on the east bank on 17 October and on the west bank on 18-22 October, and so Egyptian units attacked without combined arms, in straight-ahead frontal assaults that were quickly outflanked and crushed by the Israelis. Without the detailed plans of the General Staff, the burden of command fell back on the company, battalion, brigade and division commanders, who demonstrated that they had not learned anything from their constant training and earlier successes.

In a similar vein, Egyptian artillery fire was deadly during the initial days of the war only because the batteries had had ample time to pre-register their guns, detail the location of every Israeli prewar position, and draw up elaborate fire missions. However, after the success of the initial attack, when Israeli units were thrown back into new locations and Egyptian forces were fighting in unexpected areas, Egyptian artillery fire diminished to the point of uselessness. Also, once the Israelis had brought up their own artillery they began making short work of their Egyptian counterparts in counterbattery duels. After the Israelis had broken out on the west bank, Egyptian artillery was hardly a factor at all.<sup>356</sup>

Egypt likewise enjoyed more efficient information management than ever before during the first days of the war, only to have things disintegrate into lies and confusion beginning on 14 October. Prior to that date, Egyptian commanders at all levels, and particularly the high command appear to have had a good grasp on the situation of their

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<sup>356</sup> Anthony Cordesman, *Jordanian Arms and the Middle East Balance*, (Washington, DC: Middle East Institute, 1983), p. 82; Cordesman and Wagner, pp. 54-55; Adan, esp., pp. 120-205, 227.

own forces, and a reasonable picture of the deployment and actions of Israeli forces. Two sources appear to have contributed to this efficient flow of information along the Egyptian chain of command. First, because the Egyptians were mostly winning before 14 October there was less reason for field commanders to lie or exaggerate to cover defeats. Second, the General Staff's scheme to get information from the Israelis by monitoring their tactical communications appears to have been very successful. On 14 October this situation changed completely: the Israelis destroyed the main signals intercept site on Jebel Ataqah and the Egyptians began losing tactical engagements. The destruction of their signals intercept capability, also deprived the Egyptians of their primary means of keeping track of Israeli forces because their own field commanders did not send out regular, aggressive patrols but passively waited for information to come from higher authority.<sup>357</sup>

Starting on 14 October, the combat reports that began coming in from Egyptian tactical commanders spiraled off into the world of fantasy. The constant deception as to the size of the Israeli force on the west bank is only the best known--and probably most damaging--example of this problem.<sup>358</sup> By the same token, Egyptian senior commanders were equally bad about keeping their subordinates abreast of important information. For example, an Egyptian pilot shot down on 19 October during the air battles over the Israeli bridgehead on the west bank and captured by the Israelis was shocked to find out that there were Israeli forces on the west side of the canal.<sup>359</sup> As *The Times of London* Insight Team concluded, Egyptian communications all along the chain of command were "perverted by lies."<sup>360</sup> Elsewhere, the Insight Team wrote that, "At the most basic level, the Egyptians simply did not tell each other what they were doing, radios and field telephones were rarely used. Junior commanders simply fought the Israelis as and when the Israelis presented themselves, and gave no priority at all to making combat reports."<sup>361</sup>

### *Bright Spots in Military Effectiveness*

There were, of course, areas in which the Egyptians performed well throughout the campaign with no real fall-off in effectiveness despite the shift in fortunes after 14 October. First was the engineering effort, which while most impressive during the initial canal crossing operation, continued to meet all demands thereafter. Egyptian combat engineers did a first-rate job keeping the bridges over Suez open and building defensive positions for the forces on the east bank of the canal. Similarly, Egyptian logistics was more than adequate for the entire campaign. This too was a very creditable performance as the obstacle of the canal, the size of the invasion force, and the Israeli operations on the west bank, all could easily have caused major snares in logistical distribution, but this was never the case.<sup>362</sup> Even after the first few days, Egyptian forces never complained of a lack of supplies--until, of course, Adan encircled the Third Army, which was a failing of the combat forces, not their logistical support services. Indeed, even the Israelis were impressed with the Egyptian logistical effort.<sup>363</sup> Egyptian forces conducting static defense operations also did very well throughout the conflict. While counterattacks were often slow to develop, and rarely skillful, the Egyptians had no problem building and defending

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<sup>357</sup> Adan, esp. pp. 350, 388; Aker, p. 108; Cordesman, *The Arab-Israeli Military Balance*, p. 42; Cordesman and Wagner, pp. 46-47; El Edroos, p. 510; Insight Team, pp. 340, 344; Neff, p. 228; O'Ballance, *No Victor, No Vanquished*, p. 339; Schiff, pp. 221.

<sup>358</sup> Adan, esp. pp. 350, 388; Aker, p. 108; Cordesman, *The Arab-Israeli Military Balance*, p. 42; Cordesman and Wagner, pp. 46-47; El Edroos, p. 510; Insight Team, pp. 340, 344; Neff, p. 228; O'Ballance, *No Victor, No Vanquished*, p. 339; Schiff, pp. 221.

<sup>359</sup> Adan, p. 350.

<sup>360</sup> Insight Team., p. 344.

<sup>361</sup> Insight Team, p. 340.

<sup>362</sup> For a description see, Badri, et. al., pp. 38-85.

<sup>363</sup> See for instance Herzog, *The Arab-Israeli Wars*, p. 317.

fixed positions. The best example of this was the tremendous fight the Egyptians waged to hold the Chinese farm, but even at the end of the war Egyptian troops beat back Israeli assaults at Ismailia and Suez City on the east bank.

Unit cohesion and personal bravery also were high points for the Egyptians during the October War. Egyptian units hung together under extremely adverse conditions. Once again, the battle of the Chinese farm is the most obvious illustration of this point. The Egyptians were surprised and outflanked by the Israelis--so much so that the Israeli tanks were in the 16th Infantry Division's headquarters compound when they began firing--yet the Egyptians regrouped and eventually fought the Israelis to a standstill. Egyptian soldiers consistently sacrificed themselves for the sake of their comrades and their missions. Even by 20-24 October when the Israelis had broken out and were running amuck on the west bank, they still encountered pockets of Egyptian troops that fought hard and had to be physically overcome even after their positions had long since been rendered untenable by Israeli flanking maneuvers. Overall, there were relatively few instances when Egyptian units disintegrated in combat, and most of these came toward the end of the war as Adan and Magen's ugdot swept aside the Egyptian forces on the west bank and eventually cut off the Third Army. At that point, units of Third Army began falling apart little by little, as did some units of the mechanized and armored divisions fighting to hold back the Israeli advance.

#### *Overall Assessment*

Although the Egyptians continue to tout the October War as a great victory, in truth their successes were quite modest and their failures very considerable. The canal-crossing and consolidation of the bridgeheads were exceptionally well-conceived and planned, and very competently executed. However, this was hardly the invasion of Normandy. Indeed, what is noteworthy is the amount of effort required to pull off these operations--operations which never penetrated more than 10 or 15 kilometers into Sinai. The labor required of the Egyptian General Staff is reminiscent of the planning of such major World War II offensives as the German invasions of France and Russia or the Allied invasion of France and the breakout from Normandy, while the training imposed on Egyptian troops probably was without parallel in modern history. Nevertheless, the achievements the Egyptians secured from this labor were negligible compared to the success of those German and Allied offensives. As Trevor Dupuy and others have argued, given the enormous advantages the Egyptians enjoyed in force ratios and strategic surprise they should have been expected to do far better than they did in their initial offensive.<sup>364</sup> Moreover, by 10 October the Egyptians had shot their bolt, and without the detailed operational plans of the General Staff, Egyptian forces proved to be as ineffective as in the past.

Thus the greatest lesson of the October war was the tremendous restrictions imposed on Egyptian military operations by the limitations of Egyptian tactical formations. While Egypt's generalship may not have been perfect, it was well above average. Generals Isma'il and Gamasy, the two field army commanders--Wasif and Ma'mun--and the other members of the General Staff, performed very well throughout the war. Even though General Shazli acted as if he were commanding a different military, Isma'il consistently minimized his impact on Egyptian operations. This level of performance should have produced greater accomplishments, but it didn't because the GHQ had few useful tools with which to work.

When comparing Egyptian military effectiveness in 1967 and 1973, what stands out is that it was this improvement in Egyptian strategic leadership that was responsible for the improvement in Egyptian fortunes on the battlefield.<sup>365</sup> However, it required a *dramatic* improvement in Egyptian strategic leadership to produce only a *modest* improvement in

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<sup>364</sup> Dupuy, pp. 595-605, 632-633.

<sup>365</sup> For a concurring assessment, see Gawrych, "The Egyptian High Command in the 1973 War," entire.

Egyptian battlefield fortunes. The great weight holding Egypt back from greater success in 1973 was the ineffectiveness of Egyptian tactical formations, resulting from the limitations of Egypt's junior officer corps. This problem was clearly demonstrated in the sudden reversal in Egyptian effectiveness between the first four days of the offensive and the rest of the war. As long as Egyptian tactical formations could follow the brilliant plans drawn up by the General Staff they did well, but as soon as those plans were exceeded and the direction of operations devolved to the tactical commanders in Sinai, Egyptian operations quickly returned to previous patterns of incompetence.

### **The Gulf War 1990-1991**

The Egyptian military underwent considerable changes between the October War and the Persian Gulf War, but showed little improvement in military effectiveness in the Gulf War. For the most part, the Egyptians were able to keep politicization at low levels, although some degree of commissarism began to creep back in after the peace accords with Israel and Sadat's assassination. Egyptian society continued to develop economically, however, the rapid pace of Egyptian population growth began to undermine the socio-economic status of many Egyptians. The military began inducting large numbers of uneducated fellahin to try to head off the problems of unemployment and overpopulation, greatly decreasing the general socio-economic status of Egyptian military personnel compared to the heights attained prior to the October War. Finally, the Egyptians abandoned Soviet practices and equipment and embraced US methods and weaponry instead. Nevertheless, when Egyptian forces were put to the test of combat with Iraq they manifested many of the same problems they had consistently encountered in the past. Fortunately for Cairo, Egypt's forces were asked to shoulder only a small portion of the burden and the Iraqis were defeated largely by the United States. However, even in their limited operations the Egyptians experienced tremendous difficulties.

### **Egyptian Military Developments, 1973-1990**

The political fallout from the October War had far-reaching consequences for the Egyptian military. Egypt made peace with Israel and Israel returned the Sinai peninsula. Cairo also severed its 20-year relationship with the USSR and turned to the United States for military aid, training, and equipment. These shifts in Cairo's foreign policy led to a reconfiguration of the geopolitics of the region with Egypt's former allies (such as Syria and Libya) and its former enemies (for example, Saudi Arabia and Jordan) flip-flopping. These changes also played a major part in the assassination of Anwar Sadat and the peaceful accession of Hosni Mubarak as president.

Despite this complete reorientation of Egypt's foreign relations, as well as the change in regimes from Sadat to Mubarak, the Egyptian military remained focused on external security missions. Egypt had any number of reasons for keeping its military ready for conventional war with foreign armed forces. Cairo continued to be wary of Israel well into the 1980s and still is anxious about a long-term threat from Tel Aviv. Egypt also developed new enemies it had to watch such as the USSR and Libya. Indeed, throughout the late 1970s Libyan and Egyptian forces clashed repeatedly along their border and there were constant rumblings of an impending Egyptian invasion. During the 1970s and 1980s, Egypt also was concerned by events in Somalia-Ethiopia, Sudan, and Iran, and fretted over potential threats arising from these sources. Finally, Mubarak's regime came to the conclusion that the best way for Egypt to ensure substantial aid from the United States was to become a reliable regional military force useful to Washington. Consequently, Egyptian military training has remained focused on conventional operations, the shift of internal security responsibilities from the army to the police and security services begun in the 1960s has been institutionalized, and Cairo generally has not felt the need to drag the

military back into domestic politics. Egyptian military spending generally increased or remained flat throughout the post-October war period.<sup>366</sup>

Another reason for the increase in Egyptian military expenditures after 1973 was that Cairo began using the Army as a sort of social welfare program, inducting far more young men than necessary to keep civilian unemployment under control. Most of the college graduates in the army during the October War were demobilized and the caliber of Egyptian military manpower declined precipitously thereafter. By the late 1980s, the vast bulk of Egyptian conscripts were uneducated *fellahin* (peasants) most of whom had virtually no exposure to sophisticated machinery. US Department of Defense (DoD) officials working in Egypt unanimously agree that Egyptian enlisted personnel are incapable of performing virtually any military tasks requiring the use of equipment more sophisticated than a rifle or a shovel. Similarly, while most Egyptian junior officers are able to perform tasks reserved for enlisted personnel in the West, they are unable to perform the work normally assigned to junior officers in Western armies. One DoD official with experience in the Middle East, East Asia, and Europe commented that in Egypt he invariably worked with colonels and brigadiers on tasks that normally employed sergeants, lieutenants, and captains in Western and East Asian militaries.<sup>367</sup>

In part to keep down imports of expensive American weapons, and in part to decrease Egyptian reliance on the US as an arms supplier, the Egyptians also began investing heavily in their domestic arms industries. However, their returns continued to be extremely disappointing. Egypt was able to assemble certain large but relatively simple Soviet weapons systems, such as older model tanks, and was able to manufacture imitations of some Soviet small arms, but this was about the limit of their capabilities. Moreover, the more sophisticated the Soviet system they copied, the worse the Egyptian version of it. Thus by the late 1980s, Egypt could manufacture 122 mm artillery rockets, 23 mm AAA rounds, a crude APC and a very poor knock-off of the SA-7, but little more.<sup>368</sup> As late as 1988, Derek Hopwood called the Egyptian arms and missile industries "largely fictitious."<sup>369</sup>

After the October War, Sadat and then Mubarak both attempted to maintain the professionalism that had been achieved before the war, but with mixed results. Cairo's desire to have a force capable of fighting foreign adversaries beyond Egypt's borders led to the retention of many measures adopted in the wake of the Six-Day War. However, although Cairo still emphasizes merit over loyalty to the regime, in recent years, political connections have increasingly determined who holds senior command billets in the armed forces.<sup>370</sup> US Department of Defense officials working in Egypt report that advancement and deference among Egyptian officers more often go to those with political clout--especially to those with close ties to Mubarak--rather than to competence or experience.<sup>371</sup> Also, knowledge is recognized as power, and controlling information is seen as increasing an individual's power. US Department of Defense officials note that in the higher echelons of the chain of command, information is jealously guarded among the senior officers in an

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<sup>366</sup> Stephen Badsey, "The Doctrines of the Coalition Forces," in John Pimlott and Stephen Badsey eds., *The Gulf War Assessed*, (London: Arms and Armour Press, 1992), p. 77; Barnett, pp. 130-131; Anthony H. Cordesman, *After the Storm: The Changing Military Balance in the Middle East*, (Boulder, CO: Westview, 1993), pp. 322, 327-329.

<sup>367</sup> Cordesman, *Jordanian Arms*, p. 52; Cordesman, *The Arab-Israeli Military Balance*, p. 136; Keegan, p. 198; Drew Middleton, "US Aides say Egypt Lacks Ability to Handle Weapons," *The New York Times*, 21 February 1986, p. 8; author's interviews with US Department of Defense personnel, January-March 1992 and July 1993.

<sup>368</sup> Cordesman, *After the Storm*, pp. 329-331, 334-337, 350; Cordesman and Wagner, p. 319; Goodman and Carus, p. 85.

<sup>369</sup> Derek Hopwood, *Syria, 1945-1986: Politics and Society*, (London: Unwin Hyman, 1988) p. 111.

<sup>370</sup> Badsey, p. 77.

<sup>371</sup> Author's interviews with US Department of Defense personnel, January-March 1992 and July 1993.



effort to secure advantages over one another.<sup>372</sup>

Probably the biggest change for the Egyptian armed forces was the abandonment of Soviet equipment, organization and practices. Beginning in 1978, the Egyptian armed forces began purchasing large quantities of American military equipment and procuring American military assistance in reorganizing and reforming their armed forces. Eventually, the United States became Egypt's primary security benefactor and undertook a complete overhaul of Egyptian forces. The Egyptians had so much Soviet equipment--and American equipment was so expensive--that they could not simply junk all of their Soviet hardware and adopt an American force structure, but Soviet equipment increasingly was shunted off onto second-rate formations. The best units in the army were converted to an American-style organization and equipped with American weaponry. Large numbers of US military advisers were sent to Egypt to provide weapons instruction and operational training and Egyptian officers began attending US training courses in droves. American advisers taught the Egyptians US military tactics and encouraged them to emphasize flexibility, decentralization of authority, improvisation, aggressiveness, and accuracy in information management. By the mid-1980s the core of the Egyptian military had shed the Soviet practices they had acquired between 1955 and 1973.<sup>373</sup>

### **Egyptian Operations in Desert Storm**

Egyptian participation in the Gulf War was limited, but still significant. Egypt initially deployed forces to Saudi Arabia as part of Operation Desert Shield, the defense of the Kingdom against a feared Iraqi invasion. Eventually, Cairo agreed to participate in Operation Desert Storm, the offensive into Kuwait and southern Iraq to drive the Iraqis from Kuwait. Egypt sent the second-largest Arab contingent to the war effort, and one of the largest contingents overall. Cairo dispatched two heavy divisions--the 3rd Mechanized and the elite 4th Armored--as well as the 20th commando regiment (brigade), an airborne brigade, and supporting units.<sup>374</sup> All of these formations had been converted over to American equipment and doctrine and were specifically sent because they were considered the best in the Egyptian army. All told, the Egyptian force consisted of over 40,000 troops and 400-500 tanks.<sup>375</sup>

The Egyptians were made the centerpiece of the Joint Forces Command-North (JFC-N). The JFC-N was one of two major Arab formations in Desert Storm (the other was the Joint Forces Command-East centered on Saudi, Kuwaiti, and Qatari forces that operated along the coast of Kuwait.) In addition to the Egyptians, the JFC-N included two Saudi heavy brigades, two Kuwaiti brigades, a Syrian armored division and a Syrian commando brigade. Nevertheless, the Egyptians were considered the heart of the JFC-N not only because they had the largest force, but because US military planners expected them to be the most capable and reliable. There was great uncertainty as to whether the Syrians would participate in the offensive at all, and because their Soviet equipment was virtually identical to that of the Iraqis, they were to be kept in reserve to avoid friendly fire problems. The Saudis and Kuwaitis on the other hand were simply not judged to be serious combat units by the US personnel assigned to them. Thus it was decided that the Egyptian 3rd Mechanized Division would spearhead the attack, the 4th Armored Division

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<sup>372</sup> Author's interviews with US Department of Defense personnel, January-March 1992 and July 1993.

<sup>373</sup> Cordesman, *After the Storm*, pp. 325, 330-331, 333-336, 349-350; Cordesman and Wagner, pp. 319-324; James F. Dunnigan and Austin Bay, *From Shield to Storm*, (NY: William Morrow and Co., 1992), p. 48; and author's interviews with US Department of Defense personnel, January-March 1992 and July 1993.

<sup>374</sup> *The Economist*, "Syria and Egypt: Against Iraq," January 5, 1991, p. 32; US Department of Defense, *Conduct of the Persian Gulf War*, Final Report to Congress, April 1992, (Washington, DC: GPO, 1992), pp. 236, 500.

<sup>375</sup> Lt. Colonel Joseph P. Englehardt, *Desert Shield and Desert Storm: A Chronology and Troop List for the 1990-1991 Persian Gulf Crisis*, (Carlisle Barracks, PA: US Army War College Strategic Studies Institute, March 1991), p. 8.

would serve as an exploitation force, the Kuwaiti and Saudi units would conduct supporting attacks on the Egyptians' right flank and the Syrians would serve as a corps reserve to be called on only if the other units encountered serious problems.<sup>376</sup>

The JFC-N was assigned the sector between the US Marine Corps' I Marine Expeditionary Force (I MEF) and the US Army's VII Corps. The I MEF was the primary diversionary force, tasked with attacking into the "heel" of southeastern Kuwait to draw Iraqi attention and reserves from the main Coalition effort. The US VII Corps would be the main effort of the Coalition offensive and would attack into southern Iraq west of Kuwait and then turn east to crush the Iraqi Republican Guard. The JFC-N, sandwiched between these two massive American forces, was given western Kuwait as its operational sector and assigned the task of penetrating into Kuwait itself and then turning east to cut off an Iraqi retreat from southeastern Kuwait by seizing the main al-Basrah/al-Jahrah highway, along which Iraqi forces in southern Kuwait had to travel to escape northward. An important aspect of the JFC-N's mission was to protect the left flank of the Marine assault from a counterattack by Iraqi armor deployed in central Kuwait.<sup>377</sup>

The JFC-N attack was originally slated to kick-off on the morning of the second day of the ground war, 25 February 1991. However, the I MEF offensive into southeastern Kuwait went so well that the commander of the US Central Command (CENTCOM), General Norman Schwarzkopf, decided to advance the timing of both the US VII Corps attack and the JFC-N attack.<sup>378</sup> Of all the various units that were affected by this decision, only the Egyptian commander of the JFC-N said that he could not comply. General Schwarzkopf did his best to persuade, cajole and even threaten the Egyptians to get them to move up the start time, but they simply refused. Eventually, Schwarzkopf had to have Cairo order the Egyptian commander to advance the start time of his attack, but even then the Egyptians were not able to attack until well after CENTCOM had wanted.<sup>379</sup>

When the Egyptians finally did get moving, their operations were mediocre and they advanced at an almost glacial pace against almost no Iraqi resistance.<sup>380</sup> The Egyptians attacked into the sectors of the Iraqi 20th and 30th Infantry Divisions, both of which had been heavily depleted by desertions caused by the six-week coalition air campaign. In addition, these units had been repeatedly worked over by Coalition strike aircraft, especially A-10 attack planes, which had destroyed most of their supporting armor and artillery.<sup>381</sup> The US deputy theater commander, General Calvin Waller, remarked that "what the Egyptians are facing, two sick prostitutes could handle."<sup>382</sup> The Egyptians' mission for the first day was to breach the Iraqi defensive lines and seize the al-Abraq barracks about 20 miles into Kuwait. However, the Egyptians moved up to the flame trenches the Iraqis had dug in front of their defense lines and stopped. The Egyptians apparently had not thought through the problem of how to cross lit flame trenches and rather than improvising a solution on the spot, they simply sat and waited for the fires to

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<sup>376</sup> Rick Atkinson, *Crusade: The Untold Story of the Persian Gulf War*, (NY: Houghton Mifflin, 1993), pp. 72, 248, 391; Michael R. Gordon and Lt. General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, (Boston: Little, Brown and Co., 1995), p. 382; US DoD, *Conduct of the Persian Gulf War*, pp. 236, 258.

<sup>377</sup> Atkinson, p. 391; US DoD, *Conduct of the Persian Gulf War*, pp. 243-245, 264-265.

<sup>378</sup> US DoD, *Conduct of the Persian Gulf War*, p. 262.

<sup>379</sup> Brig. General Robert Scales, Jr., *Certain Victory*, (Washington, DC: GPO, 1993), p. 222; Bruce W. Watson, Bruce George, Peter Tsouras, B. L. Cyr, *Military Lessons of the Gulf War*, (London: Greenhill Books, 1991), p. 106.

<sup>380</sup> Atkinson, p. 405; Francis Toase, "The Land War," in Pimlott and Badsey eds., pp. 159, 191; Watson et. al., pp. 98, 106.

<sup>381</sup> Toase, pp. 159, 191; US DoD, *Conduct of the Persian Gulf War*, p. 256.

<sup>382</sup> Atkinson, p. 248.

burn out--which took four-and-a-half hours.<sup>383</sup> At the end of the first day, the Egyptians had only succeeded in crossing the flame trench and had not even breached the main Iraqi defensive lines.<sup>384</sup>

On the second day, the Iraqi units in front of the Egyptians began deserting *en masse*, a process that accelerated even further when Baghdad announced a general retreat from Kuwait late that day. As a result, Egyptian forces encountered almost no resistance whatsoever in penetrating the Iraqi defensive lines. At one point they came under desultory fire from a couple of Iraqi artillery batteries, but this soon petered out and the Iraqi infantry manning the frontline defenses mostly either fled or surrendered. An Arab journalist accompanying the Egyptians reported that the Egyptians encountered few Iraqi tanks of any kind for the first two days of the ground war. Nevertheless, the Egyptians kept up their creeping advance and would not speed up their movements to try to catch the Iraqi forces as they retreated.<sup>385</sup> Eventually, CENTCOM became so concerned about the gap opening up between the rapidly advancing Marines and the crawling Egyptians that they reoriented several American units to cover the I MEF flank.<sup>386</sup>

On the third day, the JFC-N had fallen so far behind schedule that the JFC-E had to wait for the JFC-N before it entered Kuwait City. It had been decided that both Arab commands would enter Kuwait City together as a show of Arab solidarity. By 26 February, the Iraqis had retreated from Kuwait City and the JFC-E was sitting south of the city waiting to make its triumphal entry, but the JFC-N was nowhere near Kuwait City.<sup>387</sup> Ultimately, selected units of the JFC-N were simply sent to Kuwait City to accompany the JFC-E, while the rest of the JFC-N plodded on. However, the Egyptian commander again objected. He had no specific orders to send units to enter Kuwait City and he refused to comply until Schwarzkopf reached Mubarak himself and had Mubarak order the Egyptian commander to do so.<sup>388</sup> Overall, the Egyptians took nearly a hundred casualties and had little to show for this effort.<sup>389</sup>

### **General Observations on Egyptian Military Effectiveness 1973-1991**

The Gulf War revealed what US military personnel had privately admitted for years: that despite 15 years of American aid, advice, and training, Egyptian military effectiveness has improved little, if any, since the Arab-Israeli wars. While many Westerners who have had contact with the Egyptian military claim that many of Cairo's generals are as competent as their US, Russian, or Israeli counterparts, tactical performance remains extremely limited.<sup>390</sup>

Egyptian junior officers still tend to show little innovation and initiative in combat. The halting movement of Egyptian units during the Gulf War, their unwillingness to adapt to opportunities presented by the course of battle, and their inability to solve unforeseen tactical problems are indistinguishable from the problems Egyptian units suffered in 1948-1973. Egyptian combat operations in the Gulf and in training exercises have been entirely geared toward set-piece operations on both the offensive and defensive.<sup>391</sup>

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<sup>383</sup> Atkinson, p. 405; Norman Friedman, *Desert Victory*, (Annapolis, MD: Naval Institute Press, 1991), p. 232; Gordon and Trainor, p. 382; Toase, p. 159.

<sup>384</sup> Maj. James Blackwell, *Thunder in the Desert*, (NY: Bantam, 1991), p. 194.

<sup>385</sup> Atkinson, pp. 427, 440; Friedman, p. 232; David B. Ottaway, "For Saudi Military, New Self-Confidence," *The Washington Post*, April 20, 1991, p. A14; Toase, p. 161.

<sup>386</sup> Atkinson, pp., 427, 438-440; Blackwell, pp. 199-200; Michael J. Mazarr, Don M. Snider, and James A. Blackwell, Jr., *Desert Storm*, (Boulder, CO: Westview, 1993), p. 144.

<sup>387</sup> Mazarr et. al., p. 149.

<sup>388</sup> Gordon and Trainor, p. 373.

<sup>389</sup> Englehardt, p. 8.

<sup>390</sup> Keegan, p. 199.

<sup>391</sup> Cordesman and Wagner, p. 352; Author's interviews with US DoD personnel, January-March 1992,

Overcentralization remains the rule throughout the Egyptian armed forces.<sup>392</sup> One western military officer observed that, "There are few observable signs of real change in the centralized command and control system in either the Army or the Air Force," despite constant US efforts to encourage the Egyptians to decentralize authority.<sup>393</sup> Other sources have commented that virtually all decisions must be made by a general officer, and it is virtually impossible to reverse a decision, even when it is no longer applicable because of changed circumstances.<sup>394</sup> At times, initiative among junior officers is purposely suppressed, but by the same token, few tactical commanders display a willingness or ability to act aggressively whenever they are delegated decision-making authority.<sup>395</sup> One US DoD official stated simply that, "there is no initiative at all," among lower echelons of the Egyptian armed forces.<sup>396</sup>

Egyptian forces continue to show little understanding of combined arms operations. In most exercises there is a complete separation of the various combat arms, and there is little effort to teach their proper integration. According to US DoD officials, training rarely takes place above the battalion level and infantry, armor, and artillery almost never train together. These same officials unanimously aver that Egyptian infantrymen have little or no understanding of armor operations, and vice versa.<sup>397</sup> American personnel suggest that part of this problem may be related to a persistent inability or unwillingness to integrate details into a coherent whole. For example, one US official remarked that tasks are kept so discrete that Egyptian personnel rarely see how they relate to the functioning of an entire machine or unit: "This guy does not *repair* tanks, he puts *this part* on to a tank and that's all he knows how to do."<sup>398</sup> Similarly, Egyptian training focuses on set-piece operations with little emphasis on maneuver to gain an advantage over an opponent.<sup>399</sup> This tendency was displayed in the Gulf War when Egyptian armor formations charged ahead in frontal assaults, rather than attempting to outflank or envelop Iraqi defensive positions.

Egyptian operations invariably are scripted in minute detail, even for routine training missions, and no deviation is allowed from these scripts. The efforts of American advisers and training personnel to convince the Egyptians to improvise operations, or to issue only broad guidelines and allow subordinates to fill in the details regularly fall on deaf ears.<sup>400</sup> Even the operations and training flights of the elite F-16 squadrons are completely scripted. As one US DoD official observed, "They know where to turn, and where to pretend to fire munitions, and who is going to win," before a training flight even begins. Moreover, the Egyptian pilots get extremely upset when someone does something he is not supposed to do. For this reason there apparently is widespread dislike of joint training exercises with US forces because the Americans constantly and deliberately improvise rather than sticking to the agreed-upon script.<sup>401</sup> As another example, the Egyptians were very impressed with US all-arms coordination, maneuver warfare, and the ability of US forces to carry the battle throughout the depth of the enemy's defense during the Gulf War. However, the Egyptians argue that the best way to do this is with a highly detailed

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July 1993.

<sup>392</sup> Zeev Eytan and Aharon Levran, *The Middle East Military Balance*, 1986, (Boulder, CO: Westview Press, 1986), p. 133.

<sup>393</sup> Middleton, p. 8.

<sup>394</sup> Eytan and Levran, 1986, p. 133.

<sup>395</sup> Cordesman and Wagner, p. 352; Middleton, p. 8; Author's interviews with US DoD personnel, January-March 1992, July 1993.

<sup>396</sup> Author's interviews with US DoD personnel, July 1993.

<sup>397</sup> Author's interviews with US DoD personnel, January-March 1992, July 1993.

<sup>398</sup> Author's interviews with US DoD personnel, July 1993.

<sup>399</sup> Author's interviews with US DoD personnel, January-March 1992, July 1993.

<sup>400</sup> Author's interviews with US DoD personnel, January-March 1992, July 1993.

<sup>401</sup> Author's interviews with US DoD personnel, July 1993.

operational plan that determines objectives, assigns maneuvers to the forces, allocates all air missions beforehand, and details the administrative and logistical support at all levels. In other words, they appear willing to accept US AirLand Battle doctrine, but only if it is conducted in a rigid, scripted Egyptian fashion.<sup>402</sup>

Manipulation of information throughout the chain of command also remains a major problem. During Operation Desert Storm, CENTCOM assigned US personnel to all Arab coalition forces before the start of the ground war for the specific purpose of ensuring that what the Arab units were reporting actually was happening.<sup>403</sup> Regardless of the presence of US military personnel or journalists, the Egyptian units still consistently reported fierce battles even though they actually encountered very little resistance at all.<sup>404</sup> Egyptian forces continue to suffer from often blatantly fabricated reporting--sometimes even directed by superiors to disguise problems from higher echelons. US military officials report that most senior Egyptian military commanders have no idea what is going on in their subordinate commands because they are so constantly misled.<sup>405</sup> US DoD personnel also report that compartmentalization in Egypt is so severe that before even the most minor decisions can be taken all officers with knowledge bearing on the issue must be brought together because no one has sufficient knowledge of the entire situation to make an appropriate decision on his own.<sup>406</sup>

Maintenance continues to be another source of great problems for the Egyptians. For example, Egypt required a large US presence for many years after receiving the F-4E Phantom II, and as late as 1989 its operational readiness rates for the aircraft were still low.<sup>407</sup> In the mid-1980s, the Egyptians decided that they could handle the F-4s on their own and canceled the US maintenance contracts for these aircraft. However, the Phantom squadrons immediately went "down the tubes" because the Egyptians rarely performed preventive maintenance and could not make proper repairs. Consequently, Cairo had to reverse itself and, as late as 1992, still had depot-level maintenance performed in the US.<sup>408</sup> The Egyptians have encountered similar problems learning to operate and maintain the F-16 fighter.<sup>409</sup>

As this last point suggests, many of Egypt's most debilitating problems remain with the Air Force. The EAF has probably received the most extensive and constant attention from US advisers, it has the most advanced US equipment (including F-16 fighters), and large numbers of Egyptian pilots have had at least some US training.<sup>410</sup> Nevertheless, the Air Force remains moribund. The F-4 pilots generally don't like to fly their planes because they have difficulty operating and maintaining these aircraft and an accident would look bad for the unit. More remarkably still, despite American pleading, they usually succeed in avoiding flying. According to US DoD personnel, virtually none of the Egyptian pilots use the avionics on their US-built aircraft--even the F-16 pilots. They report that even if the radar is on while they are in the air (which isn't always the case) the pilots rely on visual

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<sup>402</sup> Ephraim Kam, "Gulf War Lessons Learned by Egypt," Paper prepared for the Center for National Security Studies, Los Alamos National Laboratory, Los Alamos, New Mexico, March 1992, pp. 16-17.

<sup>403</sup> Friedman, p. 232.

<sup>404</sup> See for instance, Ottaway, p. A14.

<sup>405</sup> Cordesman and Wagner, p. 353; Aharon Levran and Zeev Eytan, *The Middle East Military Balance, 1987-1988*, (Boulder, Colo: Westview, 1988), p. 193; Author's interviews with US DoD personnel, January-March 1992, July 1993.

<sup>406</sup> Author's interviews with US DoD personnel, January-March 1992, July 1993.

<sup>407</sup> Carus and Goodman, p. 107.

<sup>408</sup> Author's interviews with US DoD personnel, January-March 1992, July 1993. Also see Cordesman, *Jordanian Arms*, p. 52.

<sup>409</sup> Cordesman, *After the Storm*, p. 340; Cordesman, *Jordanian Arms*, pp. 3, 52.

<sup>410</sup> Cordesman, *After the Storm*, p. 338; Author's interviews with US DoD personnel, January-March 1992, July 1993.

sighting and pay no attention to the radar. Fortunately for them, because exercises are scripted, there is no reason to use the radar or other avionics: every pilot knows exactly where everyone else will be, how they will maneuver and who will "win."<sup>411</sup> As one US military official put it, "They fly our planes and use our tactics, but you'd never know it."<sup>412</sup> Problems in the EAF are so bad that during the Gulf War, Cairo chose not to send any aircraft to participate in the Coalition military effort largely because Mubarak and his senior military leaders were afraid of how they would fare in combat operations.<sup>413</sup>

Overall, the changes of the 1980s can be said to have had little impact on Egyptian military effectiveness. Despite abandoning the Soviet model of operations and adopting the American model, Egyptian forces continued to manifest the same patterns of strengths and weaknesses they displayed at the height of their reliance on the Soviets. Indeed, some US personnel continue to mistakenly ascribe Egyptian problems to "things they learned from the Russians." At least among tactical formations, Egyptian combat performance as evinced during the Gulf War also seems to have been unaffected by nearly 25 years of depoliticization. Finally, the changes in the educational and socio-economic levels of Egyptian manpower appear to have made little difference in Egyptian military effectiveness. Neither the dramatic improvement of Egyptian education and socio-economic standards in the armed forces after 1967, or the equally dramatic decline in those same factors after 1973 can be demonstrated to have had a noticeable effect on the performance of Egyptian soldiers and, especially, junior officers. All told, Egyptian military effectiveness has resisted change to a remarkable degree throughout the period 1947-1991.

### **Summary: Egyptian Military Effectiveness 1947-1991**

Egyptian forces have demonstrated some remarkably persistent patterns of behavior in combat between 1948 and 1991. This is particularly true at the tactical level, where Egyptian formations have performed in an almost identical fashion in virtually every war they have fought. Egyptian junior officers consistently demonstrated an unwillingness to maneuver, innovate, improvise, take initiative, or act independently. Egyptian forces have suffered from the constant manipulation of information and inattention to intelligence gathering and accurate analysis. The Egyptian command structure has remained heavily centralized, with all decisions being referred to the highest levels of command, contributing to a persistent inability of Egyptian forces to maintain a high tempo of operations. Egyptian forces have shown little ability to conduct armor, artillery, air-to-air, or air-to-ground operations. Moreover, Egyptian combined arms operations have been regularly very poor with the important exception of the first four days of the October War. Categories of military effectiveness related to handling military equipment were also areas of weakness for the Egyptians; Egyptian units had little maintenance capability, required long periods of time to assimilate new weapons, and rarely were able to take full advantage of the capabilities of their equipment.

The Egyptians also have shown areas of consistently competent performance. The bravery of the individual Egyptian soldier is beyond question. Similarly, Egyptian unit cohesion has mostly been inconsistent but tending more toward the positive side of the spectrum. In general, one is struck by the fact that Egyptian forces regularly have fought tenaciously in impossible situations. On many occasions, Egyptian units fought on long after they had been encircled or otherwise defeated until they were physically overcome in hand-to-hand combat. Egyptian logistics and combat engineering were also areas of real

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<sup>411</sup> Author's interviews with US DoD personnel, January-March 1992, July 1993.

<sup>412</sup> Author's interviews with US DoD personnel, January 1992.

<sup>413</sup> Author's interviews with US military personnel, April-June 1991.

strength for Cairo.

Egyptian strategic leadership fluctuated considerably during this period. On the one hand, there was the dismal performance turned in by Field Marshall Amer and his cronies during the Six-Day War, while on the other hand there was the highly commendable direction of the War of Attrition and the October War by Fawzi, Isma'il, Gamasy, and their colleagues. In addition, in most of Egypt's other wars, Cairo's generals mostly performed quite adequately, if not fairly well. Mwawi in Palestine in 1948; Amer and Murtagi in Yemen in the 1960s; and Nasser, Amer and the rest in the Sinai in 1956 all did a reasonable job. They may never have been able to secure a victory through their brilliance, but neither can they be blamed for losing it out of incompetence. Indeed, with a few important qualifications, Egyptian generalship in Yemen was pretty good.

Overall, Egyptian forces regularly fought well in set-piece offensives and static defensive battles, but fell on their faces when forced to conduct unplanned, ad hoc operations or fight in fluid battles of maneuver. Ultimately, it was these problems that proved most damaging to Egyptian military fortunes over the years. Because Egyptian forces were incapable of anything more than set-piece operations and static defense, against an opponent with any skill it was simply a matter of time before the adversary was able to take the initiative and force the Egyptians to fight in a manner they were incapable of. Every war the Egyptians fought ended with little achievements--if not outright disaster--because of this tremendous tactical vulnerability.

## Summary Chart of Egyptian Military Effectiveness, 1947-1991

Category	Wars						
	1948	1956	1962-67	1967	1967-70	1973	1991
Tactical creativity	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic creativity	Adequate	Adequate	Adequate	Poor	Good	Good	--
Information flows	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Tactical initiative	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic initiative	Adequate	Adequate	Adequate	Poor	Good	Good	--
Centralization/Delegation	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Simplicity of Chain of Command	Adequate	Adequate	Adequate	Poor	Adequate	Adequate	--
Tactical use of maneuver	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic use of maneuver	Poor	Adequate	Good	Adequate	Adequate	Good	--
Employment of armor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Employment of artillery	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Air-to-air combat skills	--	Poor	--	Poor	Poor	Poor	(Poor)
Air-to-ground operations	Poor	Poor	Poor	--	Poor	Poor	(Poor)
Ad hoc operations	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Set-piece operations	Good	--	Good	Good	Good	Good	Poor
Combined arms	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Unit cohesion	Good	Uneven	Uneven	Uneven	Good	Good	Adequate
Personal Bravery	Good	Good	Good	Good	Good	Good	Good
Maintenance and repair	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Assimilation of equipment	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Logistics	Adequate	--	Good	--	Adequate	Good	--
Combat engineers	Good	--	Adequate	Adequate	Good	Good	Poor
Technical support	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Tactical intelligence	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic intelligence	Poor	Adequate	Adequate	Poor	Adequate	Good	--
Operational Security	--	Adequate	Adequate	Adequate	Good	Good	Adequate
Tactical leadership	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic leadership	Adequate	Adequate	Good	Poor	Good	Good	--
Ability to Plan and Execute Complex Operations	--	--	Good	--	Good	Good	Poor
Officer rotations	--	--	--	--	--	--	--
Morale (At start of war)	Good	Good	--	Adequate	Poor	Good	Adequate
Attention to training	Poor	Adequate	Adequate	Adequate	Good	Good	Adequate
Direction of training	Poor	Poor	Adequate	Adequate	Good	Good	Good
Ability of soldiers to benefit from military training	Poor	Poor	Poor	Adequate	Adequate	Good	Poor
Preferred operational tempo	Slow	Slow	Slow	Slow	Slow	Slow	Slow
Attention to offensive operations	Poor	Adequate	Adequate	Adequate	Good	Good	Good
Attention to defensive operations	Poor	Adequate	Adequate	Adequate	Good	Good	Good
Attention to air superiority	Poor	Poor	--	Adequate	Good	Good	--
Unit and service coordination	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Willingness to take casualties	Low	Low	Low	Low	Moderate	Moderate	Low

A blank square indicates that insufficient information was available to make a judgment in this category for this particular war.

Parentheses indicate that the judgment is based on peacetime training exercises, not actual combat.



## Chapter 7

### Iraqi Military Effectiveness, 1947-1991

The modern Iraqi military has its origins in the British mandate over Iraq after World War I. Initially, the British formed a military force known as the Iraq Levies, comprising several battalions of ground troops whose primary responsibility was to garrison the air bases of the Royal Air Force built in Iraq after the war.<sup>1</sup> Although at first the Levies included Muslim Arabs, it was heavily dominated by Christian Assyrians. The British soon decided that the Arabs were not very competent soldiers (a sentiment grudgingly shared by many Arabs, causing great resentment against the Assyrians) and turned the Levies into an almost wholly Assyrian force.<sup>2</sup>

Although the Levies were adequate for the defense of the RAF bases, the threat of war with Turkey prompted the British to increase Iraq's indigenous military forces. The Turks claimed the former Ottoman *vilayet* of Mosul as a part of Turkey. This province consisted of what is today the northern third of Iraq, mainly Iraqi Kurdistan, and included the vast Kirkuk oil fields. Turkish troops began pushing into Iraqi Kurdistan, forcing the small British garrisons out of as-Sulaymaniyyah and Rawanduz in eastern Kurdistan.<sup>3</sup> To help deal with this Turkish threat the British established the Iraqi Army in 1921. Six years later, the British created a small air force to support the army.<sup>4</sup> The British recruited former Ottoman officers to man the junior and middle-ranks of the new Iraqi officer corps; however, British officers occupied the senior commands and most of the training slots. In addition, the British provided the Iraqi Army with weapons and British doctrine, and trained the troops to defeat the anticipated Turkish invasion of northern Iraq.<sup>5</sup>

By the late 1920s, the threat of a Turkish attack had abated, but the Iraqi Army still had many concerns. The Iraqis, and their British masters, continued to fret over Turkish or Persian encroachment on Iraqi territory. Both of these states were considerably more cohesive than Iraq and possessed far superior armies, and both had dynamic leaders with claims against Iraqi territory.<sup>6</sup> In addition, the Iraqi armed forces were responsible for maintaining the internal integrity of the state against separatist revolts--particularly by the Kurds--as well as rebellions by the powerful tribes of western and southern Iraq. Eventually, the British concluded that the Iraqi army was simply not capable of handling either the Turks or the Persians, and that the RAF, supported by the

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<sup>1</sup> Paul P. J. Hemphill, "The Formation of the Iraqi Army, 1921-1933," in Abbas Kelidar, ed., *The Integration of Modern Iraq*, (NY: St. Martin's Press, 1979), pp. 88-94; and Mohammed A. Tarbush, *The Role of the Military in Politics: A Case Study of Iraq to 1941*, (London: Kegan Paul International, 1982), p. 76.

<sup>2</sup> Hemphill, pp. 94, 106; and Edgar O'Ballance, *The Arab-Israeli War, 1948*, (London: Faber and Faber Ltd., 1956), p. 82.

<sup>3</sup> Phebe Marr, *The Modern History of Iraq*, (Boulder, Colo: Westview, 1985), p. 40; and Tarbush, p. 83, 94.

<sup>4</sup> Tarbush, p. 78.

<sup>5</sup> Hemphill, pp. 94-97; Reeva S. Simon, *Iraq Between the Two World Wars: The Creation and Implementation of a Nationalist Ideology*, (NY: Columbia Press, 1986), pp. 55, 115; Tarbush, pp. 78-79.

<sup>6</sup> Tarbush, 89-94.

Iraqi Levies, should assume full responsibility for external defense. The British increasingly relegated the Iraqi Army to internal security duties.<sup>7</sup>

There was some question as to whether the Iraqi army was capable of even this role without considerable RAF assistance. In 1928, the British found it necessary to increase the number of British officers commanding units in the Iraqi army because the Iraqi and Turkish officers were slow to adapt to modern modes of warfare.<sup>8</sup> In 1931, Kurdish unrest broke out into outright revolt and Iraqi Army units were badly punished by the Kurdish tribesmen under Shaykh Ahmad Barzani, requiring British intervention to restore order.<sup>9</sup>

In 1932, Iraq was granted its independence by Great Britain. One of the first acts of the new Iraqi government was the abolition of the hated Assyrian Levies and their merger into the Army.<sup>10</sup> The disbanding of the Levies set the stage for what is now referred to as the "Assyrian Affair." Iraq's Assyrians generally were hated by its majority Arab population, who saw the Assyrians as foreigners and tools of the British. Moreover, the Assyrians too wanted a state of their own--carved out of the pasture and farmlands of eastern Iraq--which did not sit well in Baghdad. In the summer of 1933, there were a number of clashes between Assyrians and Arabs in some of the northern cities which provided an excuse for the Iraqi Army to have its revenge on its old rivals. With the Levies gone, the Assyrian population was defenseless, and large numbers of civilians were massacred by Iraqi troops. The Arab population of Iraq reveled in the "great victory" over their Assyrian enemies. General Bakr Sidqi, commander of the Iraqi forces that conducted the massacres, was fêted as a military hero of Napoleonic proportions.<sup>11</sup>

Bakr Sidqi's apotheosis was later complimented with a victory over the more militarily potent tribes of the upper Tigris, who revolted against the monarchy in 1935-6.<sup>12</sup> This string of successes fed Bakr Sidqi's considerable ambitions. Unfortunately for the Iraqi monarchy, it had not learned to politicize the top military commands. Instead, senior positions were filled largely through graft and bribery, thus the senior officers were up for the highest bidder.<sup>13</sup> In 1936, while the Chief of Staff was out of the country, Bakr Sidqi--then Deputy Chief of Staff--secured the cooperation of the commander of the Air Force, and several other top military leaders in ousting the government and demanding that the King appoint him Prime Minister.<sup>14</sup>

The Bakr Sidqi coup ushered in a long period of army involvement in Iraqi domestic politics, in other words praetorianism. This ended only in 1941, when the military high command (which ran the country) attempted to distance Iraq from Britain at the nadir of British fortunes during World War II. Although Iraq was nominally independent, Britain effectively still governed the country, exercising a veto over Iraqi foreign and national security policy. The Iraqi high command considered the prospect of British defeat at the hands of Nazi Germany an opportunity to rid themselves of British control. Seeing the Iraqi moves as yet another threat to their position in the Middle East (Rommel was deep inside Egypt at this point), the British dispatched a small force which handily defeated the much larger but thoroughly incompetent Iraqi army and air force, ousted the military commanders and their Prime Minister--Rashid Ali al-Kaylani--and

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<sup>7</sup> Mehrdad R. Izady, *The Kurds*, (Washington, DC: Crane Russak, 1992), pp. 62-65; Marr, p. 57; Simon, pp. 116-119; Marion Farouk-Sluglett and Peter Sluglett, *Iraq Since 1958*, (London: Kegan Paul International, 1987), p. 11.

<sup>8</sup> Simon, p. 116.

<sup>9</sup> Izady, pp. 64-65; Hemphill, p. 105; Simon, p. 119.

<sup>10</sup> Hemphill, p. 106; Tarbush, p. 120.

<sup>11</sup> Sluglett and Sluglett, p. 15.

<sup>12</sup> Marr, pp. 66-68.

<sup>13</sup> Tarbush, p. 119.

<sup>14</sup> Marr, pp. 68-72; Tarbush, pp. 121-123.

installed the pro-British Nuri as-Said in his place.<sup>15</sup> Nuri would effectively control Iraq for the next 17 years, bringing some stability after the tribulations of military rule.

### **The War of Israeli Independence, 1948**

Iraqi military performance against the nascent Israeli army in 1948 foreshadowed future problems. The Iraqi army fought extremely poorly in Palestine, despite the considerable size of the force they sent to drive the Israelis into the sea. After World War II, Baghdad's armed forces remained largely a palace guard, having concentrated mostly on internal security missions for the last decade or more. Although the British had restored the monarchy to full rule in 1941, the generals were still an important influence, hence praetorianism was also an issue. The power of the military high command made the government uneasy, prompting Baghdad to apply commissarist measures to prevent the armed forces from launching another coup. Iraq was extremely underdeveloped, although by comparison it was somewhat better off than other Arab states such as Jordan and Saudi Arabia. Finally, the Iraqis relied wholly on British equipment and military methods.

#### **The Iraqi Armed Forces in 1948**

After the Second World War, the first combat Iraqi forces saw was in Palestine. Iraq joined with the other Arab states in opposing the creation of a Jewish national homeland in Palestine, and sent a sizable force to help crush the newborn state of Israel. The Iraqi army had grown considerably since its modest beginnings. In 1948, it boasted 21,000 men in 12 brigades and an air force of 100, mostly British, aircraft.<sup>16</sup> However, the Iraqi military suffered from a variety of problems. First, it labored under the shame of its humiliating defeat at the hands of a much smaller British force in 1941. Second, the Iraqi government had learned the lesson of the Bakr Sidqi coup and the military governments that followed, and had inflicted a heavy dose of commissarist politicization on the armed forces. Senior officer slots were reserved for those who had demonstrated unswerving loyalty to the government. Officers were drawn heavily from Iraq's elite--the *Sunni* Arabs of the urban upper classes and the families of the great tribal shaykhs--whose prosperity was closely linked to the fortunes of the government. On the other hand, the rank and file of the Iraqi army were made up of poor *shi'ah* and *Sunni* peasants, as well as large numbers of Kurds. The officers cared little for their troops, and the enlisted reciprocated in these feelings.<sup>17</sup>

The Iraqis contributed a large contingent to the war in Palestine. Initially, the Iraqis sent 5,000 men including four infantry brigades, an armored battalion, and support personnel, plus another 2,500 "volunteers" to serve with the former Iraqi officer Fawzi al-Kaukji, then commanding the Arab Liberation Army (ALA).<sup>18</sup> Iraq continuously sent reinforcements, and at its peak, the Iraqi expeditionary force mustered some 10-12,000 men.

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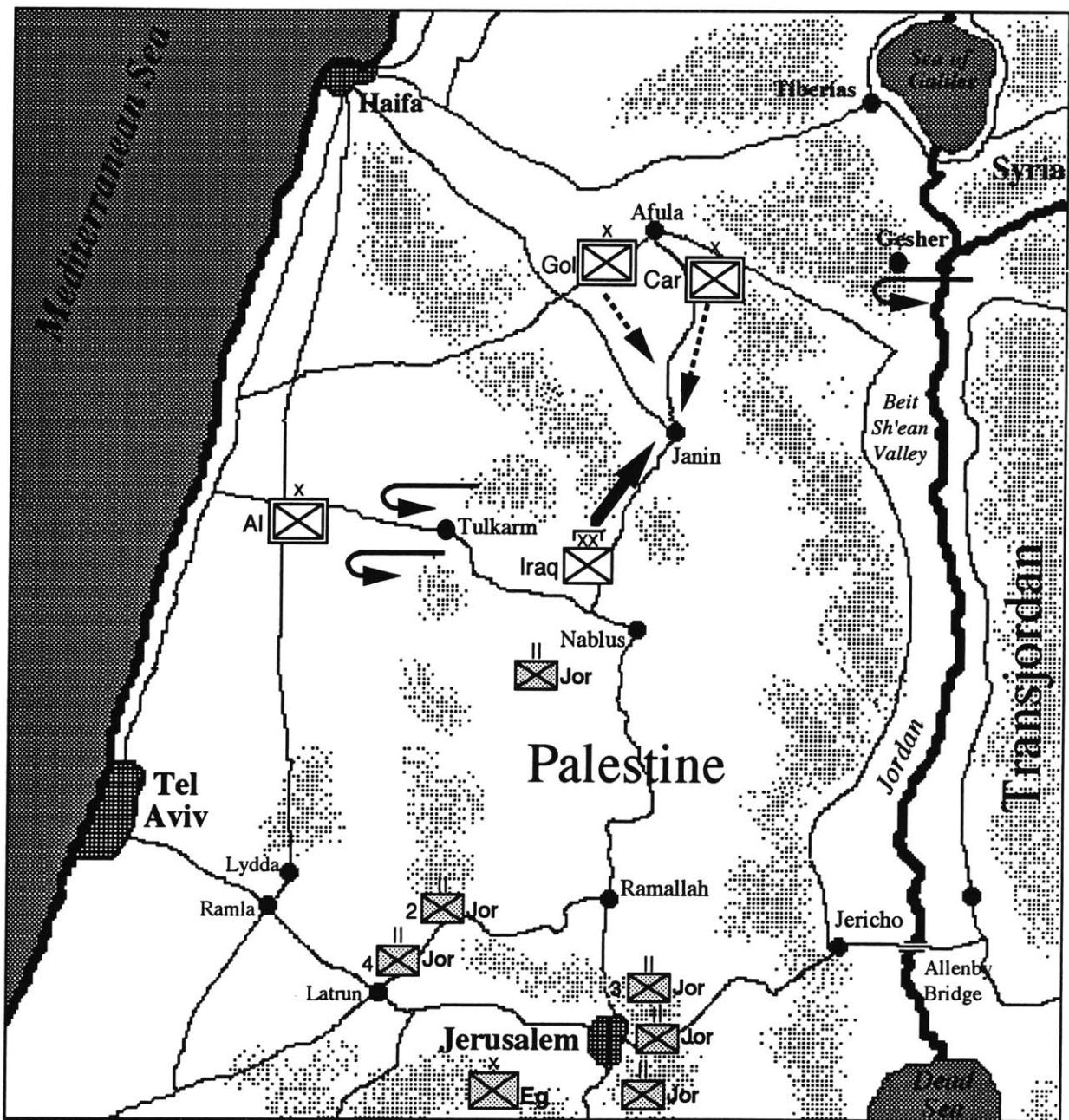
<sup>15</sup> Two of the best accounts of the role of the military during this period of Iraqi history are Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970), pp. 15-40; Marr, pp. 76-90.



<sup>16</sup> O'Ballance, *The Arab-Israeli War*, p. 82; and Edgar O'Ballance, *The Kurdish Revolt, 1961-1970*, (Hamden, CT: Archon Books, 1973), p. 59.




<sup>17</sup> Be'eri, pp. 20-52; Colonel Trevor N. Dupuy, *Elusive Victory*, Paperback edition, (Dubuque, IA: Kendall Hunt, 1992), p. 18-19; O'Ballance, *The Arab-Israeli War*, p. 83; Sluglett and Sluglett, p. 20.

<sup>18</sup> Dupuy, pp. 18; O'Ballance, *The Arab-Israeli War*, pp. 84, 115.

## Iraqi Army Operations, 1948



-  - Iraqi Countermoves
-  - Failed Iraqi attacks
-  - Israeli attacks

-  - Iraqi Units
-  - Israeli Units
-  - Other Arab Units

### **Iraqi Operations with the Arab Liberation Army**

The first military operation in which the Iraqi forces under Kaukji participated was the defense of Safed in April and May 1948. A force of 600 Syrian and Iraqi ALA irregulars were sent to defend the important town of Safed in the Galilee. The town was located in very difficult terrain, and was protected by two police forts built into the rock of the hills. It was an extremely formidable position. Because of its importance, Safed was one of the first towns targeted for capture by the Israeli *Haganah*. In April 1948, the ALA and the local militia defeated two Israeli attacks by a small force from the Golani brigade, primarily because of the incredible strength of the natural defensive positions. However, in May, Col. Yigal Allon returned to Safed with a fresh battalion and immediately seized one of the two police posts. Allon was then reinforced with another battalion and attacked the Arab forces in the town itself. Despite heavy Israeli mortar fire, the Arabs successfully turned back repeated Israeli assaults. Finally, four days after Allon's first attack on the town, the Israelis attacked again at night in a rainstorm and surprised the Arab defenders. The Arabs still resisted fiercely and forced the Israelis to fight house-to-house to take the town. Although the Arabs had to be evicted from every inch of the town, when it fell they immediately gave up the last police post and withdrew.<sup>19</sup>

On April 25, the Israeli Irgun Zvi Leumi (the free-lance militia/terrorist group then headed by Menachem Begin) assaulted the Arab town of Jaffa with 600 men. Jaffa was defended by a similar-sized force of Iraqi ALA irregulars. Although the Irgun claimed to specialize in urban warfare, they were stopped cold by the Iraqis in house-to-house combat. At the end of two days of combat, the Irgun leadership was forced ask for help from the Haganah. Jaffa fell to the Israelis several days later in a massive brawl that included the intervention of several British units still trying to maintain control before the end of the Mandate on 14 May.<sup>20</sup>

On April 29, units of the Israeli Palmach assaulted positions on the Katamon ridge south of Jerusalem held by Iraqi ALA irregulars. The Palmach secured a foothold with a surprise night attack that took the monastery that dominated the ridge. However, in the morning, the Iraqis launched a series of vicious counterattacks. The fighting was extremely tough, but eventually the Israelis were able to hold out, and at noon were reinforced by another battalion. The Iraqis were exhausted and bloodied and retired from the field.<sup>21</sup> After these initial defeats, the ALA was inactive for several months, and when they resumed operations, most of the Iraqis had been withdrawn to join the Iraqi Army forces operating on the West bank.

### **Iraqi Army Operations on the West Bank**

When the Iraqi expeditionary force first arrived in Transjordan in early April 1948, it consisted of one infantry brigade and a supporting armored battalion commanded by General Mahmud.<sup>22</sup> On 15 May, Iraqi engineers built a pontoon bridge across the Jordan river. The combat units crossed the Jordan and launched a frontal assault against the nearby Israeli settlement of Gesher, only to be quickly driven back. The next day, the Iraqis tried again, but this time their armor attacked from the south and their infantry attacked from the north. Although this move might have put the Israelis in a difficult position, the infantry and armor failed to properly coordinate their attacks, allowing the Israelis to redeploy their small force along internal lines and defeat each Iraqi attack in turn. Both Iraqi forces launched clumsy frontal assaults, and the lack of infantry support

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<sup>19</sup> Dupuy, pp. 28-29; O'Ballance, *The Arab-Israeli War*, pp. 45-48

<sup>20</sup> Dupuy, p. 30; and O'Ballance, *The Arab-Israeli War*, p. 61.

<sup>21</sup> Dupuy, p. 38; and O'Ballance, *The Arab-Israeli War*, p. 60.

<sup>22</sup> Dupuy, p. 50; and O'Ballance, *The Arab-Israeli War*, p. 115.

for the armor left the Iraqi tanks and armored cars easy prey to Israeli anti-tank teams.<sup>23</sup> Several days later, the Iraqis tried to attack another Jewish settlement in the same area but failed to scout their route adequately and were ambushed by an Israeli force before they could even reach the targeted settlement. These defeats convinced the Iraqis to abandon this sector of the front and try their luck elsewhere.<sup>24</sup>

### *Operations in Samaria*

In early May 1948, the Iraqi expeditionary force moved into the West Bank area of northern Samaria and occupied the "strategic triangle" bounded by the Arab towns of Nablus, Jenin, and Tulkarm. This was a crucial sector for the Arabs because it was the ideal launching pad for an attack eastward against Haifa to split the narrow Israeli corridor along the coast, and it guarded the right flank of Transjordan's Arab Legion concentrated in the Jerusalem corridor. Previously, this sector had been held by elements of the ALA that were too weak to pose much of a threat to the Israelis. As the Iraqis deployed to this area, they received reinforcements in the form of another infantry brigade and another armored battalion.<sup>25</sup> Additional reinforcements followed, quickly bringing the Iraqi contingent up to seven or eight infantry brigades, a full armored brigade, and three air force squadrons.<sup>26</sup>

In late May, the Haganah tried to relieve the pressure on the Jerusalem corridor by attacking the police fort at Latrun held by the Arab Legion. Israeli attacks were extremely heavy and the Jordanians pleaded with the Iraqis to attack either west toward Haifa or north into Galilee to draw off Israeli forces from Latrun. The Iraqis were extremely slow to respond and only launched two desultory attacks that were quickly and easily defeated by local Israeli forces. Nevertheless, the Haganah commanders recognized that the size of the Iraqi force and its location in northern Samaria made it an extremely dangerous threat. Rather than wait for the Iraqis to begin an offensive, the Israelis decided to preemptively attack the Iraqis by driving south from Galilee to take Jenin, and possibly Nablus, and cut the Iraqi supply lines back across the Jordan.<sup>27</sup>

In late May the Israelis kicked off their offensive against the Iraqis. The plan was to have the Alexandroni brigade make a diversionary attack against Tulkarm while the Golani brigade drove south toward Jenin. After the Golanis secured the high-ground north of Jenin, the Carmeli brigade would pass through its lines and seize Jenin. The offensive began on the night of 28 May, although for some reason, the Alexandronis failed to conduct their feint. The northern attack still made good progress initially, however. The Golanis were able to take a series of hills, villages, and police posts on the route to Nablus. The Iraqi defenders were extremely slow off the mark, and Iraqi armored car battalions were constantly beaten to important positions by Israeli infantry. In a series of skirmishes, the Golanis consistently outmaneuvered the Iraqi forces, repeatedly catching them in their flank and mauling them before they could retreat. On several occasions, the Iraqis launched determined attacks against positions the Israelis had beaten them to, but in every case the Israelis had already dug-in by the time the assault arrived, and they had little trouble throwing the Iraqis back.<sup>28</sup>

Nevertheless, throughout this period the Iraqis were able to redeploy their forces, sending reinforcements north to stop the Haganah advance. When the Carmeli brigade took over the spearhead of the Israeli attack, they began to run into these Iraqi

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<sup>23</sup> Dupuy, p. 51; Lt. Col. Natanel Lorch, *The Edge of the Sword: Israel's War of Independence, 1947-1949*, (NY: G.P. Putnam and Sons, 1961), p.168; and O'Ballance, *The Arab-Israeli War*, p. 115.

<sup>24</sup> Lorch, p. 169.

<sup>25</sup> Dupuy, p. 51; and Lorch, p. 169.

<sup>26</sup> O'Ballance, *The Arab-Israeli War*, p.115.

<sup>27</sup> Dupuy, p. 51; Lorch, pp. 169-170; and O'Ballance, *The Arab-Israeli War*, p.115.

<sup>28</sup> Dupuy, p. 51; Lorch, pp. 171-174; and O'Ballance, *The Arab-Israeli War*, pp.115-116.

reinforcements. By the time the Israelis reached Jenin on 3 June, an Iraqi brigade had been able to dig-in in the town and on the two key hills that dominated it from the south. The Carmelites launched an extremely clumsy frontal assault that night but still pushed the Iraqis off both hills in a protracted battle. The next morning, the Iraqis brought up fresh forces and counterattacked with a reinforced battalion supported by artillery and some inaccurate but still bothersome airstrikes, that eventually retook the western hill from the exhausted Israelis. A fierce battle then developed for control of Jenin itself, and although the lines did not change much, the Iraqis continuously poured in fresh troops until the Israeli commander concluded that holding the town was not worth the price and pulled back to the hills north of Jenin.<sup>29</sup>

At this point, Iraq's contribution to the Arab war effort effectively ended. The Israelis had suffered heavy casualties in the fighting for Jenin, and although the Iraqis had suffered even worse, they had far more troop strength available. Lt. General John Bagot Glubb, commander of the Arab Legion, urged the Iraqi commanders to immediately pursue the withdrawing Israelis with fresh units in hope of inflicting greater damage and possibly even overrunning eastern Galilee. But the Iraqis would not budge. In the following weeks the Israelis made a series of spoiling attacks against Iraqi positions in the Samaritan triangle for fear that the Iraqis were intending just such an offensive. The Iraqis defended when attacked, but made no aggressive moves of their own and ended the war in the same positions.<sup>30</sup> On Iraqi passivity, Edgar O'Ballance remarked:

One can only wonder at the general inaction of such a large body of troops. They merely stepped into positions vacated by Glubb Pasha's troops and Kaukji's men who were pushed out to make way for them, and they made no attempt to extend their territory. Their one clash was that at Jenin, which resulted in an Israeli defeat but as they held all the aces and the Israelis walked into their fields of fire and generally used little tactical common sense, they could hardly claim that it was the result of any particular skill on their part. Their brief counterattack, their only offensive movement, was successful, but it was extremely limited and was not followed up. . . . It was a case of a golden opportunity lost merely for the lack of aggressive spirit and energy.<sup>31</sup>

Apparently, the reason for this inaction was that the Iraqi commanders were not given any explicit orders by the military command in Baghdad. They were sent to Palestine and ordered to aid the Arab cause, but with no specific instructions as to how to do so. The initial attacks on Gesher were General Mahmud's idea, but their failure seem to have squelched his initiative, and so they simply sat passively waiting for directions from Baghdad that never came.<sup>32</sup>

### **The Kurdish Revolt: Part I, 1961-1970**

The Iraqi armed forces fared little better in their next conflict, the first campaign against the Kurds. Although Iraq's senior military commanders eventually came up with a feasible strategy, the forces under their command were so tactically inept that they

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<sup>29</sup> Dupuy, p. 51; Lorch, pp. 174-175; and O'Ballance, *The Arab-Israeli War*, pp. 116-118.

<sup>30</sup> Dupuy, p. 51; Lorch, pp. 175-176; and O'Ballance, *The Arab-Israeli War*, pp. 116-118.

<sup>31</sup> O'Ballance, *The Arab-Israeli War*, p. 118.

<sup>32</sup> See for example, Mark A. Heller, "Iraq's Army: Military Weakness, Political Utility," in Amatzia Baram and Barry Rubin eds., *Iraq's Road to War*, (NY: St. Martin's Press, 1993), p. 39.

never came close to successfully implementing it. The result was a humiliating stalemate. This poor performance was preceded by continued growth of politicization and the beginnings of an increased reliance on Soviet methods. Iraq was a thoroughly praetorian state, the monarchy having been overthrown by the army in 1958, and between 1961 and 1970 Baghdad saw a procession of military dictators. Inevitably, fear of a coup caused each dictator to tighten the commissariat controls on the military. By contrast, palace guardism actually declined during this period as the Iraqi military concentrated on defeating the Kurds, who while an internal threat, were strong enough to warrant the full attention of Baghdad's forces in counter-insurgency operations. Finally, Iraqi contact with the Soviet Union began in the late 1950s and deepened throughout this period, however, Soviet methods always took second place behind the strong, lingering British influence.

### Politicization

In the 1950s, the Iraqi army underwent a dramatic expansion. New brigades were created and were grouped into four divisions. By 1956, the army had 60,000 men and the air force fielded 250 aircraft, mostly British, some of which were modern jet fighters.<sup>33</sup> This growth effectively ended the dominance of the Iraqi upper classes over Baghdad's officer corps. In order to find enough personnel to command the burgeoning ranks, Iraq began to recruit heavily among the peasantry and urban middle and lower classes.<sup>34</sup> One element of the Iraqi population that viewed the military as an excellent opportunity for social mobility were the Kurds. Bakr Sidqi had been a Kurd, and his success had encouraged many of his compatriots to enlist as well. By 1961, both the enlisted ranks and the officer corps were about one-third Kurdish.<sup>35</sup>

The 1950s also witnessed the final demise of the Iraqi monarchy. Although the regime had thoroughly politicized the senior officer billets, they were never able to effectively ensure the loyalty of the junior officer ranks. In 1958, Brigadier 'Abd al-Karim Qasim, commander of the 20th Infantry Brigade and leader of a group of disgruntled lower-ranking officers calling themselves the "Free Officers" to display their Nasserist sentiments, overthrew the government. The coup was actually executed by Lt. Colonel 'Abd as-Salem Arif, commander of a battalion of the 19th Infantry Brigade (a brigade of the same division as Qasim's 20th Brigade) who persuaded the other battalion commanders to seize control of the brigade as it moved through Baghdad on its way to support the Hashimite monarchy of Jordan, then threatened by Nasserist elements and Palestinian refugees. The coup was quick but bloody, resulting in the deaths of the young king Faysal II, the regent, and Nuri as-Said.<sup>36</sup>

Once in power, Qasim moved to ensure the loyalty of the armed forces. One of his first acts was to purge every officer of the rank of brigadier or higher.<sup>37</sup> Later, Qasim would conduct additional purges to weed out officers suspected of loyalty to the old regime. Within months, Qasim faced a challenge from the Nasserists within the army, led by his former ally Arif. In a bloody struggle, Qasim crushed Arif and ousted the Nasserists from the army, primarily with the aid of Iraq's growing communist party.<sup>38</sup> These various internal clashes also fueled ethnic and tribal rivalries, leading to unrest and even revolts that Qasim also had to quash to secure his control of the government.<sup>39</sup> Finally, Qasim came to fear his reliance on the communists and moved against them

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<sup>33</sup> O'Ballance, *The Kurdish Revolt*, p. 59.

<sup>34</sup> Sluglett and Sluglett, p. 44.

<sup>35</sup> O'Ballance, *The Kurdish Revolt*, p. 78.

<sup>36</sup> Marr, pp. 155-159; O'Ballance, *The Kurdish Revolt*, pp. 61-65; Sluglett and Sluglett, pp. 45-53.

<sup>37</sup> O'Ballance, *The Kurdish Revolt*, p. 62; Sluglett and Sluglett, p. 50.

<sup>38</sup> Marr, pp. 159-162; Sluglett and Sluglett, pp. 58-60.

<sup>39</sup> Marr, pp. 162-164; Sluglett and Sluglett, pp. 66-72.



too.<sup>40</sup> In several of these uprisings, different army units were pitted against each other in combat, and all of these internal struggles sparked additional purges of the armed forces. Eventually, in 1959, Qasim even went so far as to create a fifth division for the army consisting only of troops loyal to him and garrisoned in Baghdad.<sup>41</sup> Then, to further reduce the ability of Iraqi army units to attack his regime, Qasim issued army field formations with only two-days of rations and limited quantities of ammunition.<sup>42</sup>

### **Sovietization**

While the constant infighting and purges decimated the Iraqi armed forces during the early period of Qasim's reign, an opening to the Soviets soon began to rebuild Iraqi military power. Qasim's early association with both Nasserists and communists and his overthrow of the pro-British monarchy made him an instant friend of the USSR. The first Soviet arms began to arrive in Iraq at the end of 1958. The first delivery consisted of a squadron of MiG-15s which were later followed by MiG-17s, MiG-21s, transport aircraft and helicopters. In February 1959, about 150 Soviet tanks (mostly T-34/85s) were delivered to the Iraqi army. Meantime, small numbers of Soviet advisers began to arrive, primarily to teach the Iraqis how to operate Soviet hardware, although some were set to work analyzing problems in the Iraqi Air Force.<sup>43</sup>

### **The Course of the Revolt, 1961-1970**

Initially hopeful that the new Qasim regime would grant them autonomy, or even independence, the Kurds were quickly disappointed. In September 1961, the charismatic Kurdish leader Mustafah Barzani, the younger brother of Shaykh Ahmad, openly revolted against Baghdad. Starting with a force of 600 loyal followers, Barzani was able to quickly convince a number of other Kurdish tribes to join him, and by spring 1962 he had 5,000 full-time guerrillas and another 5-15,000 partisans who could be called up to participate in specific operations for short periods of time.<sup>44</sup> His first offensive in the fall of 1961 caught the Iraqi government completely by surprise. Barzani's forces moved with great speed and recruited volunteers as they advanced, with the result that within two weeks, the Kurds had overrun virtually all of Iraqi Kurdistan, and were at the gates of the great northern cities of Mosul, Kirkuk, and Arbil.<sup>45</sup>

Iraq maintained one of its five infantry divisions--the 2nd--in Kurdistan, and although this unit had sat passively while the Kurds advanced, when the first Kurdish offensive had run its course Qasim ordered it to counterattack. Qasim also bribed a large number of Kurdish tribes to turn against Barzani. It is testimony to the weakness of the Kurds at this point that this one Iraqi division was able to reverse most of the gains of the first Kurdish offensive. The 2nd Infantry Division counterattacked all across Kurdistan, with its battalions pushing out along the major roads. The 2nd Division's operations were very clumsy: battalions stuck to the roads and rarely put out flank guards or even patrolled territory ahead of them, they consistently kept to the low-ground, launched frontal attacks when faced with resistance, and employed their armor largely as moveable canon. Nevertheless, the Kurds were unprepared for serious combat and they retreated quickly before the Iraqi army.<sup>46</sup>

Barzani was forced to withdraw into the mountains for the winter. However, his cause was greatly helped by the beginnings of large-scale desertions from the Iraqi Army.

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<sup>40</sup> Marr, pp. 164-167; Sluglett and Sluglett, pp. 62-66..

<sup>41</sup> O'Ballance, *The Kurdish Revolt*, p. 64.

<sup>42</sup> O'Ballance, *The Kurdish Revolt*, p. 88.

<sup>43</sup> Marr, pp. 164-165.

<sup>44</sup> Marr, p. 177.

<sup>45</sup> O'Ballance, *The Kurdish Revolt*, p. 76.

<sup>46</sup> O'Ballance, *The Kurdish Revolt*, pp. 76-78.

Most of the Kurds in the Army were townsmen from the major cities, not tribesmen from the mountains. Thus at first, when as many tribes opposed Barzani as supported him and the revolt seemed to be as much a tribal struggle as anything else, the number of deserters was small. However, as time passed and more and more tribes threw in their lot with Barzani, the revolt took on the character of a true nationalist uprising, and then Kurds began to desert the Army in droves. The Kurdish desertions not only served to sap Army strength and morale (the 2nd Infantry Division was largely Kurdish), but brought much-needed training and weaponry to the Kurdish guerrillas.<sup>47</sup>

In March 1962, Barzani launched another offensive, well before Baghdad believed he could, and so once again caught the army by surprise. The Kurds inflicted heavy casualties on government units in Kurdistan but were unable to take the towns of Zakhu and Dahuk in western Kurdistan, the primary objectives of the offensive. Barzani did, however, succeed in mauling several of the major tribes arrayed against him, which was an important victory. Within a few weeks, the Kurdish offensive petered out, and the government was content to remain on the defensive, holding the towns and main roads and doing little else, and so the war settled into a stalemate.<sup>48</sup>

### *Opposing Strategies*

After the first Iraqi counteroffensive in 1961 failed to crush the revolt, Qasim adopted a strategy of remaining on the defensive and hoping that the revolt would collapse from attrition, tribal infighting, and the difficulty of supplying guerrilla forces in the mountains.<sup>49</sup> Baghdad reinforced its units in Kurdistan, redeploying the 1st Infantry Division from Ad Diwaniyah in Mesopotamia to the Mosul sector, thereby allowing the 2nd Infantry Division to concentrate its forces in eastern Kurdistan. Additional reinforcements continued to flow north so that by May 1963, three-quarters of the Iraqi army was facing the Kurdish guerrillas. The army maintained garrisons in the various towns of Kurdistan, and to keep these garrisons supplied (and to try to prevent supplies from reaching the Kurds) they patrolled the major roads during the day. Every morning the various Iraqi bases would send out infantry columns led by tanks and supported by artillery to clear the roads and disperse Kurdish ambushes. In addition, Baghdad relied heavily on its air force to terror bomb Kurdish civilians. Iraqi aircraft conducted incessant airstrikes against Kurdish villages--including napalm strikes--in the hope of convincing Barzani's men to put down their weapons. This strategy did nothing to advance Baghdad's aims. However, because Iraqi intelligence was thoroughly politicized and consistently told Qasim exactly what he wanted to hear--namely that the Kurds were on the verge of collapse--the government persisted in this approach.<sup>50</sup>

If the Iraqis had tried, it is unlikely that they could have come up with a worse strategy than this one. The government's inactivity gave the Kurds the breathing space they desperately needed to regroup and train. The Kurds adopted a similar strategy to that of the regime: they too would try to starve out their adversary. However, the Kurds planned to gradually isolate the scattered Iraqi garrisons by blocking the roads, ambushing supply convoys, and constantly raiding and harassing the Iraqi camps. The Kurds had the advantage of being at home in the mountains and as long as they could get supplies from their brethren in Iran and Turkey, there was no limit to how long they could hold out. By taking control of the major roads at night, and using secondary routes which the army did not patrol during the day, the Kurds had plenty of access to the supplies they needed. Meanwhile, the Iraqi air attacks against Kurdish villages ensured a steady flow of new recruits and trained, armed Kurdish deserters to Barzani's camp. Perhaps of

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<sup>47</sup> Marr, pp. 178-179; O'Ballance, *The Kurdish Revolt*, p. 88.

<sup>48</sup> O'Ballance, *The Kurdish Revolt*, pp. 81-82.

<sup>49</sup> Marr, p. 179.

<sup>50</sup> O'Ballance, *The Kurdish Revolt*, pp. 89-102.

greatest importance, the Kurds used this time to turn their men into a true guerrilla army instead of a bunch of roving bandits. The Kurdish leaders (particularly Jalal Talabani) used the Kurdish deserters from the Iraqi Army as a cadre around which they built a full-time guerrilla force known as the *Peshmerga*. The principal asset of the army deserters was their discipline and their knowledge of military organization, both of which were slowly transmitted to the Kurdish tribesmen. By spring 1963, the Kurds fielded 15,000 Peshmerga and another 10,000 partisans.<sup>51</sup>

### *Iraq on the Offensive*

Ultimately, the Kurds proved correct and it was the Iraqi garrisons that began to starve. Baghdad increasingly had to resupply different bases with airdrops, and even had to withdraw some garrisons altogether. Meanwhile, Qasim's passive strategy galled the Iraqi high command, who recognized that it could not succeed, and so wanted to go on the offensive. Army discontent with his conduct of the Kurdish campaign contributed to Qasim's overthrow by Arif and the Iraqi Ba'th party in February 1963. The Ba'th too tried to reach an understanding with the Kurds, but their positions were simply incompatible, and so the fighting resumed.<sup>52</sup>

With Qasim gone, Baghdad's generals threw away the old starvation strategy and began planning for a major offensive. In June 1963, the Iraqis struck, attacking all across Kurdistan. The Iraqis massed three division-sized task forces, each with four infantry brigades and supported by armor and airpower, against western, central, and eastern Kurdistan. In addition, after two years of constantly being ambushed by the Kurds, some Iraqi commanders had learned to picket the hills with infantry as their columns moved along the roads through the valleys. The Iraqis made greatest progress in western Kurdistan, where they secured the areas around Zakhu, Dahuk and Aqrah, razed numerous Kurdish villages and drove deep into the mountains. However, the Kurds simply retreated deeper into the mountains and by September this thrust had run out of steam. The central thrust turned into a near catastrophe as the critical central brigade-column allowed itself to be trapped in Rawanduz gorge by Peshmerga under Omar Mustafah. The Iraqis had to divert all three other brigades in this sector from their assigned objectives to save the surrounded force, and it took eight weeks before the brigade could be extracted from the gorge. The mission of the eastern thrust was to clear the major road from Kirkuk to as-Sulaymaniyah and then to block the routes to Iran. However, it took two brigades two months to secure the road because of stubborn resistance and constant ambushes by the Kurds. The length of time required to accomplish the initial task effectively brought this attack to a halt as well.<sup>53</sup>

By September, the situation had returned to a stalemate. The failure of this offensive was largely tactical. While the Kurds had become quite proficient at conducting ambushes, they were incapable of anything else, having failed to develop any tactics that would allow them to follow up and capitalize on the temporary successes of their ambushes. In addition, Kurdish troops had only very light weapons--basically nothing heavier than a 50 mm. mortar--and handled those they had extremely poorly, even rifles and pistols. But the Iraqis more than made up for these shortfalls with limitations of their own. In particular, Iraqi units insisted on conducting frontal assaults against defended Kurdish positions. With the exception of several of the brigades employed in western Kurdistan, they rarely conducted reconnaissance or deployed flank guards while they moved, with the result that they were regularly surprised and ambushed by the Peshmerga. Although the Iraqi air force was busy bombing Kurdish civilians, they rarely provided air support to Iraqi ground forces, and on the rare occasions they did,

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<sup>51</sup> Marr, pp. 178-179; O'Ballance, *The Kurdish Revolt*, pp. 85-91.

<sup>52</sup> Marr, pp. 176-185.

<sup>53</sup> Marr, p. 187; O'Ballance, *The Kurdish Revolt*, pp. 104-110.

their aim was so bad it was a virtual toss-up as to which side would take casualties. Finally, Iraqi army communications security was non-existent, while the Kurds had acquired several Iraqi field radios and among their deserters were signals personnel who were able to monitor Army troop movements for the guerrillas.<sup>54</sup>

### *The Fall of the Ba'th and the 1965 Iraqi Offensive*

The debacle in Kurdistan was just one of several disasters the Ba'thist regime racked up in its early days in power. This string of misfortune resulted in a bloodless coup by 'Abd as-Salem Arif, who took over in November 1963.<sup>55</sup> Once in power, Arif acted to ensure his continued reign. He purged the senior ranks of Qasim's supporters and others he suspected did not support his rule. He created the Republican Guard, to serve as his personal bodyguard, largely from the 19th Infantry Brigade, with which he had overthrown the monarchy in 1958.<sup>56</sup> Arif also named his brother, 'Abd ar-Rahman Arif commander of the 5th Infantry Brigade, which also served as a palace guard.<sup>57</sup>

The abject failure of the 1963 offensive, plus internal unrest in Baghdad, prompted the Arif regime to begin negotiations with the Kurds.<sup>58</sup> These negotiations broke down in the winter of 1964/1965 and so in April 1965 the Iraqi army tried another attack. In this instance, the principal strategic innovation the regime brought to bear was that it had secured the cooperation of the Turkish and Iranian governments, both of whom also had long-standing problems with their Kurdish populations. The Turks agreed to launch an offensive into Turkish Kurdistan simultaneous with the Iraqi attack, while Iran agreed to deploy forces to close its borders to retreating Kurdish units.<sup>59</sup>

This campaign largely followed the script of the previous Iraqi efforts. Poor maintenance and faulty repair work had become a serious problem for the Iraqis, as less than half of their relatively new Soviet armored vehicles were operational and only 30 of 140 MiG-17s were flyable.<sup>60</sup> Consequently, Baghdad could only muster 9 brigades, amounting to about 40,000 troops. Yet once again, the Iraqis attacked all across Kurdistan. Once again they advanced along the roads with armor out in front, and once again the Kurds ambushed and harassed them all the way, while the Iraqis retaliated for these attacks by burning and bombing nearby Kurdish villages. When government columns attacked the towns of Panjwin, Chwarta, and Mahut in eastern Kurdistan, the Peshmerga dug-in and fought hard, stopping the army in its tracks. As had become the norm, the government attack was finished with little to show by September.<sup>61</sup>

### *The Spring 1966 Offensive*

Looking to break out of this rut, the Iraqi high command decided to try a limited offensive during the winter to try to block the routes to Iran. In the winter, the snows closed many of the mountain passes, limiting the number of routes available to the Kurds to move men and supplies back and forth from Iran. So in January 1966, the Iraqis

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<sup>54</sup> O'Ballance, *The Kurdish Revolt*, pp. 104-110.

<sup>55</sup> Marr, pp. 186-190; Sluglett and Sluglett, pp. 93-98.

<sup>56</sup> Sluglett and Sluglett, pp. 93-94. The Sluglett's claim that it was the 20th Infantry Brigade that served as the core of the original Republican Guard. However, the Sluglett's also mistakenly state that Arif was a battalion commander in the 20th Infantry Brigade, not the 19th Infantry Brigade. I think it is clear that they have simply mistaken the two brigades, and the brigade that Arif turned into the Republican Guard was in fact the 19th Brigade--his old brigade, whose loyalty he felt he could count on in all circumstances--and not the 20th Brigade, which was Qasim's old brigade and which Qasim had made part of *his* bodyguard.

<sup>57</sup> Marr, p. 190.

<sup>58</sup> Marr, pp. 186-190; Sluglett and Sluglett, pp. 93-98.

<sup>59</sup> O'Ballance, *The Kurdish Revolt*, p. 126.

<sup>60</sup> Nadav Safran, *From War to War*, (NY: Pegasus, 1969), p. 239.

<sup>61</sup> O'Ballance, *The Kurdish Revolt*, pp. 125-126.

attacked from the Khanaqin area, driving north toward Panjwin. The Iraqis had become so formulaic in their operations that this sudden departure from their previous pattern took the Kurds by surprise. The Iraqis profited from this surprise, capturing Panjwin against only light opposition. The Kurds quickly regrouped, however, and counterattacked hard against the Iraqis in and around Panjwin. The fighting grew increasingly fierce as did the weather, threatening the Army's supply lines, and eventually the Iraqi commanders decided to pull back. Although they accomplished little in terms of securing territory, the Iraqis were greatly heartened by their winter offensive. In particular, they concluded that the links to Iran were both the most valuable to the Kurds (the Iranian government had begun covertly sending arms to the Iraqi Kurds in 1965) and the most vulnerable, and made plans for a much more ambitious operation in the spring.<sup>62</sup>

The long-awaited Iraqi spring offensive kicked off on 4 May 1966. The Iraqis again assembled nine brigades with 40,000 men but this time they concentrated nearly all of them in the narrow eastern sector of Kurdistan, where they faced only about 3,500 Peshmerga. The Iraqi operation was to be a pincer movement to sever eastern Kurdistan from western Kurdistan, and to block the vital supply routes from Iran. The southern pincer would follow largely the same route used during the winter offensive, pushing north in the direction of Panjwin and as-Sulaymaniyyah, while the northern pincer would drive north and east from Arbil to Raniyah and Qal'at Dizah. The northern force initially made good progress, securing Rawanduz gorge and then pressing on to take Mt. Handrin and Mt. Zozik. However, the Iraqis then made the crucial mistake of building their camp in the valley between these mountains while leaving the surrounding heights undefended. Barzani immediately recognized this golden opportunity and called his forces to Mt. Handrin as quickly as possible. On 11 May, Barzani fell on the Iraqi forces in the valley and butchered them. In two days of fighting the Iraqis suffered 2,000 killed, and those who escaped were forced to leave their heavy equipment behind and make their way out over the mountains. Some Iraqi units surrendered *en masse* to the Kurds, and many survivors deserted as soon as they reached safety.<sup>63</sup>

#### *A Domestic Political Interlude*

The Mt. Handrin disaster brought the 1966 offensive to an abrupt halt. Moreover, it so completely demoralized the army that Baghdad once again resumed negotiations with the Kurds. These negotiations were suspended on several occasions while domestic politics took center stage in Baghdad. 'Abd as-Salem Arif died in April 1966, only to be succeeded by his brother, 'Abd ar-Rahman Arif. 'Abd ar-Rahman hung on for another two years before being overthrown by another coalition of Ba'thists and military officers on 17 July 1968. Having learned the lesson of its experience with the Arifs, the Ba'th immediately moved against its erstwhile allies in the Army, and on 30 July they ousted the senior military officers with whom they had colluded only two weeks before.

To secure their hold on power, the Ba'thists, led by General Ahmed Hasan al-Bakr, purged the officer corps, appointing 100 loyal officers to the top posts in the army, air force, and Republican Guard. Additional purges followed, culminating with the dismissals of the Army Chief of Staff, the commander of the Baghdad garrison, and all of the division commanders. Moreover, the Ba'thist leadership was careful as to which officers were given key command positions. Al-Bakr and his cousin, Saddam Husayn at-Tikriti, made sure that positions in critical regime-protection units and the security services went to family members and friends from their home town of Tikrit.<sup>64</sup>

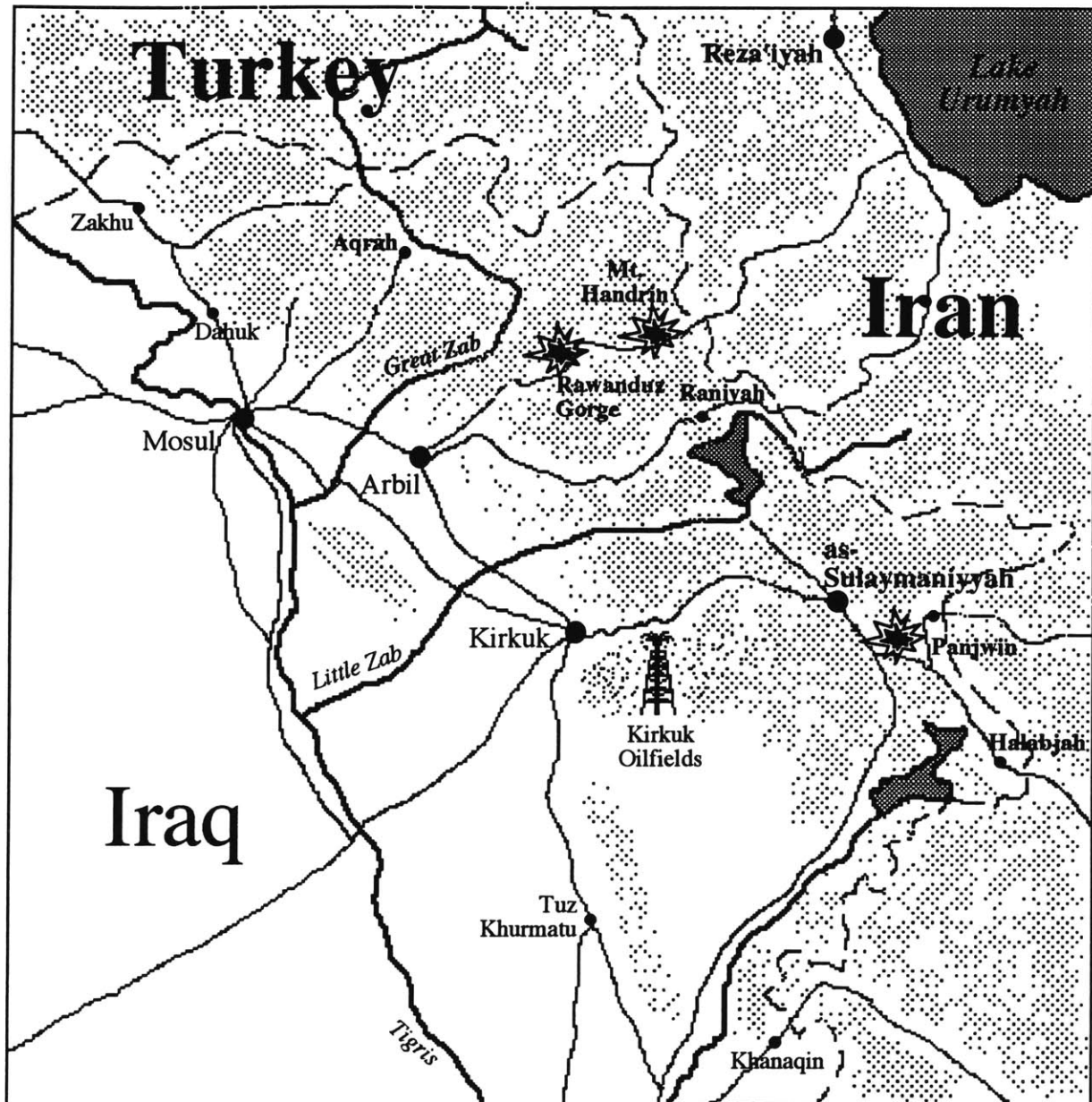
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<sup>62</sup> Marr, p. 198; O'Ballance, *The Kurdish Revolt*, pp. 133-134.

<sup>63</sup> Marr, p. 199; O'Ballance, *The Kurdish Revolt*, p. 137.

<sup>64</sup> Amatzia Baram, "The Future of Ba'thist Iraq: Power structure, Challenges, and Prospects," in Robert Satloff ed., *The Politics of Change in the Middle East*, (Boulder: Westview, 1993), p. 36; Marr, pp. 204-228; Sluglett and Sluglett, pp. 107-120.

## Major Battles of the Iraqi Campaigns Against the Kurds, 1961-1970



 - Major Battles

### *Iraq's Final Offensives*

After the chaos of these internal changes died down in 1969, the new Ba'th regime returned to the bargaining table with the Kurds, but again the talks quickly dissolved and Baghdad attempted a military solution to the impasse. The Iraqi high command decided upon an offensive plan very similar to the one employed in the disastrous 1966 campaign, however, this time they were determined to do it right. They assembled a force of 60,000 men--nearly the entire Iraqi army--and concentrated it against eastern Kurdistan. Once again, the Iraqi blueprint was to drive north from the Khanaqin area to seal the border with Iran, while another force drove east from Arbil to split Kurdistan in half. Remembering the success of the first winter offensive, Baghdad attacked in January, and again took the Kurds by surprise. Surprise, and the sheer size of the Iraqi force, allowed the government to throw the Kurds back in several areas and to occupy the key towns of Panjwin and Qal'at Dizah. However, true to form, the Kurds regrouped and fought ferociously, a winter storm descended on Kurdistan, and these factors--plus constant ambushes against the Iraqi supply lines--prompted the government to pull back and relinquish many of their gains.<sup>65</sup>

The fighting for the rest of the year was no more decisive. Two months later, on 1 March, Barzani counterattacked and drove the Iraqis back to their January start-line. In August, the army regrouped and launched a ten-brigade offensive into the same area of eastern Kurdistan. However, Barzani had concentrated 15,000 Peshmerga in this area and these forces stopped the offensive almost as soon as it began. Specifically, Iraqi units suffered near-disasters near Dukan and Arbil, and the specter of another Mt. Handrin convinced Baghdad to bring the operation to a halt. Another source of pressure on the Ba'th regime was that its verbal attacks and a number of indelicate foreign policy gambits created serious tensions with Israel, Syria, and Iran, forcing Baghdad to redeploy units from Kurdistan to guard its other borders. These various factors brought the Ba'thists to the conclusion that they had to end the Kurdish revolt, and so in March 1970, the regime published a manifesto granting autonomy and a number of other key concessions to the Kurds.<sup>66</sup>

### **General Observations on Iraqi Military Performance Against the Kurds, 1961-1970**

Counter-insurgency (COIN) campaigns are rarely easy for any military, and there is a long list of insurgencies that prevailed or just survived for many years despite the best efforts of very competent armies. For example, the Greek and Yugoslav partisans defied the German *Wehrmacht* for four years, while the Viet Cong and Afghan *Mujaheddin* eventually outlasted the two superpowers. However, such was not the case with the Kurds. The COIN campaign against the Iraqi Kurds was eminently winnable.

First, the Kurds were lousy insurgents. While they eventually learned how to execute an ambush, that was the limit of their capabilities and they never were able to convert the temporary success of an ambush into a more meaningful military defeat for the government. Even after the Mt. Handrin disaster, the Iraqi forces that escaped from the valley were not pursued, nor did the Kurds use the momentum they had gained to overrun additional nearby garrisons--all of which were thoroughly demoralized by the defeat. The Kurds rarely had enough rifles to arm all of their men (who rarely exceeded 15-25,000 in number) and did not get any weapons heavier than light mortars until Iran provided 140 artillery pieces in 1969.<sup>67</sup> Despite the fact that all male Kurds handle weapons since childhood, they were remarkably poor marksmen and had awful fire-discipline, with the result that they usually were desperately short of ammunition.<sup>68</sup>

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<sup>65</sup> O'Ballance, *The Kurdish Revolt*, p. 151.

<sup>66</sup> Marr, pp. 222-223; Sluglett and Sluglett, pp. 126-132.

<sup>67</sup> O'Ballance, *The Kurdish Revolt*, pp. 172-173.

<sup>68</sup> O'Ballance, *The Kurdish Revolt*, p. 87.



Kurdish leadership was mediocre at best. Jalal Talabani may have been their best field commander but he changed sides several times during the course of the war and so his impact was limited. Mustafah Barzani was tremendously charismatic but not a very good general--his recognition of the opportunity at Mt. Handrin being a notable exception.

Second, the mountains of Kurdistan are not all that unfavorable to a COIN operation, as the Turks and Iranians discovered. While it is difficult for a modern army to bring its war machine fully to bear in this terrain, the mountains do have several advantages for COIN operations. It is very difficult to grow food on the mountains of Kurdistan, thus insurgents must have access to the towns and major valleys where food is available, and controlling these areas is not terribly difficult. As the Iraqis eventually figured out, the mountains channel the movement of supplies for the insurgents. A cart, a mule, and even a man carrying a pack are very limited in the routes available for them to take in the mountains, nor were the Kurds ever willing to employ the kind of human convoys the Viet Cong used to keep their troops supplied over the Ho Chi Minh trail. Also, in winter the number of routes available for movement of supplies by any means drops precipitously. The Kurds also were heavily dependent on supplies provided by the Kurds of Turkey and, especially, Iran (and later, on supplies from the Iranian government). Thus, as the Iraqis finally discovered, cutting the Kurdish supply routes from Iran would cripple the insurgency.

Finally, the Iranian and Turkish militaries have both effectively crushed their own Kurdish insurgencies--repeatedly--indicating Baghdad almost certainly could have done the same. The fact that the Kurds seem to launch an all-out revolt against Turkey and Iran every decade or two does not undermine the point that both Ankara and Tehran have figured out how to defeat these Kurdish rebellions whenever they occur. The problem Iran and Turkey face is that they consistently fail to address the underlying political problems that give rise to these insurgencies, and so from time to time the Kurds revolt again, only to be crushed in yet another COIN campaign. The important point is that there is no particular reason why the Iraqis could not have done the same in 1961-1970.

So why is it that the Iraqis not only failed to crush the Peshmerga but were so regularly humiliated trying to do so? Baghdad's strategic and operational leadership must be assigned some portion of the blame, but cannot be held responsible for the ultimate failure. The Iraqis did not think through how to conduct a counter-insurgency campaign but instead appear to have considered it the same as conventional military operations.<sup>69</sup> In addition, the Iraqi high command seems to have only attempted to formulate a theory of Kurdish vulnerabilities twice. The first occasion was under Qasim, and on that occasion they came up with absolutely the wrong answer. On the second occasion, in 1965-1966, the Iraqis hit upon the dependence of the Peshmerga on the supply lines to Iran. This turns out to have been the right answer: it was the central component of the strategy the Iraqis employed to successfully defeat the Kurds in 1975, and then again in 1988. What's more, the two offensives that the Iraqis launched in 1966 and again in 1969 to try to implement this strategy were well planned and entirely feasible: the Iraqis concentrated overwhelming force against a vulnerable sector; the mission, to block the passes into Iran and those connecting eastern and western Kurdistan, should have been well within the capabilities of the forces employed; and the campaigns were very competently planned.<sup>70</sup> So why did they fail?

The problem was Iraq's tactical performance. Iraq's tactical units were inept and entirely inflexible. They moved slowly and rarely ventured off the roads. Most units didn't bother to deploy flank guards and patrolling was virtually unheard of. Iraqi tactical commanders insisted on sticking to the low ground, thereby forfeiting the high ground to the insurgents. Iraqi units failed to integrate the various combat arms into combined arms

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<sup>69</sup> In the Iraqis' defense, the US military would make exactly the same mistake in Vietnam.

<sup>70</sup> O'Ballance, *The Kurdish Revolt*, p. 170.



teams, and had tremendous difficulty coordinating the actions of units as small as platoons and companies. As a result, Iraqi units were regularly ambushed by the Kurds, and in several cases were virtually annihilated by Kurdish traps. Iraqi commanders invariably relied on frontal assaults lacking any subtlety or subterfuge and relying on firepower or pure *élan* to carry the attack to victory. Despite their control of the skies, and the absence of even light anti-aircraft weapons in Kurdish hands until the very end of the war, the Iraqis were never able to make their air force count for anything. The Iraqi Air Force generally was used only to bomb defenseless Kurdish villages (constantly replenishing Barzani's ranks), and when committed to direct support of ground operations it proved useless. Iraqi pilots couldn't hit anything small enough to have tactical value, they were painfully slow to respond to the needs of ground commanders, and were frightened off by the slightest resistance from the target.

After several initial miscues, Iraq's generals eventually came up with a good strategy and adequate plans to accomplish that strategy. However, Iraq's tactical formations proved incapable of executing this strategy, and so the Iraqi military went from failure to failure and, ultimately, the regime was forced to compromise.

### **The October War, 1973**

When Iraq again went to war with Israel during the October War of 1973, there had been several important changes to the Iraqi military, yet their performance remained remarkably constant. First, the Soviet influence on Iraqi tactics and doctrine reached its zenith at this point. Although Soviet methods never comprised more than a small portion of Iraqi practices, in 1973 they were at their peak. Meanwhile, as the Ba'th consolidated its hold on power it eradicated the last vestiges of praetorianism and took commissarism to new heights in the Middle East. Palace guardism retained some influence because the Ba'th still saw the military as a force to control Iraqi society, however, Baghdad began to increasingly see its armed forces as a tool for other tasks, paving the way for a slow turn toward increased attention to external security missions. Despite these changes, the Iraqis performed abysmally in combat against the Israelis on the Golan heights. One bright spot that did emerge, however, was Iraq's logistical system, which performed extremely well in supplying the large Iraqi expeditionary force in battle so far from Baghdad.

### **Iraq and the Iraqi Military, 1967-1970**

The Iraqis basically missed the 1967 Arab-Israeli war. A number of factors conspired to prevent them from participating. Although an Iraqi brigade was stationed in western Jordan, the Israeli attack against the West Bank unfolded so quickly that the Iraqis could not organize themselves and move to the front lines in time before Jordan threw in the towel. Iraqi forces suffered from severe readiness problems--one third of their tanks were inoperable because of maintenance problems--that would have required weeks if not months to address. Finally, when the Iraqis did finally get part of their force moving, the Israelis blasted it with heavy airstrikes that essentially stopped the unit in its tracks.<sup>71</sup> Moreover, after the Mt. Handrin disaster, the army was in poor shape, and may have been reluctant to take on another conventional army given their problems with guerrillas--hence their slow start and quick halt. Thus, the only Iraqi participation during the war was an inauspicious air force operation. On 5 June two Iraqi Tu-16 bombers tried to bomb Israel, but could not locate either Ramat David airbase or Tel Aviv and so dropped their ordnance on Israeli farmland.<sup>72</sup>

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<sup>71</sup> Edgar O'Ballance, *The Third Arab-Israeli War*, (Hamden, Conn: Archon Books, 1972), p. 178.

<sup>72</sup> Ehud Yonay, *No Margin for Error: The Making of the Israeli Air Force*, (NY: Pantheon Books, 1993),

By 1973, the Ba'th were firmly in charge, having crushed all viable political rivals. In addition, the Ba'thists had assiduously imposed a severe brand of commissarist politicization on the Iraqi armed forces to ensure their loyalty to the new regime. Hasan al-Bakr and Saddam Husayn introduced a wide range of measures designed to secure their regime from a military coup and ensure their complete control over military operations. They made Ba'th party membership necessary for admission to Iraq's military academies. They attached "morale officers" (modeled after Soviet political commissars) to Iraqi military units down to battalion level. They created a number of new internal security services and then implanted their agents throughout the armed forces. Frequent purges resulted in the arrest or dismissal of hundreds of career military officers. These draconian measures effectively took the Iraqi military out of politics, but deeply instilled politics in the military.<sup>73</sup>

Despite the lingering distaste for the British colonial period, the Iraqi armed forces retained British military doctrine as their method of operations. Unfortunately, the Iraqis basically retained the old World War II-version of British doctrine as this was the last period of time that Iraqi troops had been trained by the British. Also, as was evident from their operations in Kurdistan, most of Iraq's tactical commanders at brigade-level and below had an extremely poor understanding of exactly how to apply British doctrine with the result that many Iraqi operations bore little resemblance to the Sandhurst manuals they sought to emulate. To complicate matters further, the Iraqis had adopted a number of Soviet methods, in particular, they took to Soviet-style Ground Control Intercept (GCI) officers for the direction of air-to-air combat, and in many areas they had not fully integrated these Soviet methods into the overarching British-style doctrine.<sup>74</sup>

Iraq eventually contributed a fairly significant force to the Arab cause in the 1973 war. By the end of the war, the Iraqi expeditionary force operating with the Syrians in southwestern Syria amounted to 60,000 men, 700 tanks (all T-55s), 500 armored personnel carriers (mostly Topaz and M-113s), and over 200 artillery pieces. This force comprised two armored divisions, two infantry brigades, twelve battalions of artillery, and a special forces brigade. Moreover, the two armored divisions that were sent, the 3rd and the 6th, were unquestionably the best formations in the Iraqi Army. Indeed, the 3rd Armored Division, the Salah ad-Din forces, was the elite unit of the Army and Iraqi officers avidly competed to be assigned to it.<sup>75</sup>

### The Logistical Effort

Iraq's greatest accomplishment in the October War was just getting there and staying there. To preserve the security of their plans, Egypt and Syria purposely did not inform Iraq of the impending attack. The Iraqis found out about the war the way the rest

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p. 250.

<sup>73</sup> Hanna Batatu, "Political Power and Social Structure in Syria and Iraq," in Samih K. Farsoun ed., *Arab Society: Continuity and Change*, (London: Croom Helm, 1985), p. 45; Uriel Dann, "Foundations of the Ba'th Regime in Iraq since 1968," in Itamar Rabinovich and Haim Shaked eds., *From June to October*, (New Brunswick: Transaction Books, 1978), pp. 314-315; Kanaan Makiya (writing as Samir al-Khalil), *Republic of Fear: The Politics of Modern Iraq*, (Berkeley, CA: University of California Press, 1989), pp. 25-27; and Marr, p. 213.

<sup>74</sup> Tzvi Ofer ed., *The Iraqi Army in the Yom Kippur War*, translated by "Hatzav," (Tel Aviv: Ma'arachot, 1986), p. 25. Many in the West mistakenly assumed that the Iraqis had wholeheartedly embraced the Soviet model, and Iraqi tactical ineptitude contributed to this confusion. For example, during the October War, Iraqi armor proved so bad at implementing British bounding-overwatch tactics that their attacks looked more like Soviet-style echeloned assaults, leading observers to conclude that the Iraqis had adopted Soviet practices. However, this was not the case, as their doctrine remained overwhelmingly British and their execution, uniquely Iraqi.

<sup>75</sup> Ofer, pp. 11, 56; and John S. Wagner, "Iraq," in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, CT: Greenwood Press, 1983), p. 67.

of the world did, by hearing about it on the radio on 6 October, and so their logisticians had to start from a standing stop. Moreover, the units the Iraqi General Staff chose to form an expeditionary force to aid the Syrians were deployed all over Iraq, while their potential battlefield was 1,200-1,500 kilometers away on the Golan heights. Iraq's deployment was further hindered by a number of factors. At that time, Iraq had a very limited road network, preventing many units from moving directly to Syria. Iraq had only a small number of heavy equipment transporters (HETs) so many Iraqi armored vehicles had to drive to Syria on their own tracks, resulting in frequent breakdowns that slowed the deployment. As a result of poor maintenance practices, Iraqi units had very poor operational readiness rates. Therefore, to bring the various units slated to go to Syria up to full strength, Baghdad had to strip other units elsewhere in Iraq of operational equipment, and transport it to the earmarked units before they departed. Finally, Syria claimed it could not support the Iraqi forces, so Iraq not only had to move a corps-sized force 1,400 km, it also had to keep that force supplied from depots in Iraq.<sup>76</sup>

The Iraqis proved more than equal to the task. They named a senior quartermaster officer as overall coordinator of the logistics effort, with authority to make all decisions and override all orders regarding the movement of units and supplies to Syria.<sup>77</sup> Iraqi units began moving to Syria immediately, and the first combat formation, the 8th Mechanized Brigade of the 3rd Armored Division, arrived south of Sasa six days later on 12 October, having driven on its own treads from its training grounds at ar-Ramadi, 1,300 km away.<sup>78</sup> In addition to meeting all of the needs of their corps-sized formation deployed 1,400 km from Baghdad, Iraq's logisticians also managed to transfer to Syria 15,000 tons of jet fuel and 10,000 tons of diesel fuel to replace Syrian losses from Israeli airstrikes.<sup>79</sup> According to one Syrian officer:

Not one of the Iraqi officers I spoke to mentioned that he had faced a logistics problem while moving to the front, whether relating to food, water, fuel, ammunition, repairs or evacuation of damaged equipment or of the wounded.<sup>80</sup>

### Combat Operations<sup>81</sup>

Iraq's most important contribution to the Arab war effort was simply being in the right place at the right time. When the 3rd Armored Division arrived in Syria their route of march took them northwestward up through the al-Hara/Kfar Shams area of Syria, southwest of Damascus. At this time, Israel had retaken the Golan and had launched an

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<sup>76</sup> Maj. General D. K. Palit, *Return to Sinai: The Arab Offensive, October 1973*, (Dehra Dun: Palit and Palit Publishers, 1974), p. 108; Ofer, pp. 25, 51-56, 59; Wagner, p. 67.

<sup>77</sup> Ofer, p. 64.

<sup>78</sup> Ofer, p. 51.

<sup>79</sup> Ofer, pp. 195-198.

<sup>80</sup> Haytham al-Ayyubi, "The Middle East Conflict: The Military Dimension, Interviews with Riad Ashkar and Haytham al-Ayyubi," *Journal of Palestine Studies*, Vol. IV, No.4, 1975. Al-Ayyubi was a Lt. Colonel in Syria's combat engineer corps during the October War.

<sup>81</sup> The various descriptions of Iraqi operations on the Golan heights are all highly contradictory. For the most part, whenever there was a discrepancy among the different accounts, I relied on the descriptions in the Ofer study. My reason for doing so is that Ofer's study is the official Israeli General Staff critique of the official Iraqi General Staff analysis of the battle. Consequently, it provides both the authoritative Iraqi and Israeli perspectives on the battle. To a lesser extent, I relied on Herzog and Dupuy's work, primarily because their descriptions were close enough to that presented in the Ofer study that I was confident of their general accuracy. I drew very little on most other accounts of this combat as being too unreliable. In particular, although Edgar O'Ballance presents a very detailed story in his book, *No Victor, No Vanquished*, he appears to have based his description primarily on interviews with the various Iraqi brigade commanders that are inaccurate to the point of bordering on fantasy.

assault of its own to threaten the Syrian capital. Iraq's route of march unexpectedly placed them on the right flank of the Israeli counteroffensive. Moreover, by sheer coincidence, the Iraqis arrived at the critical moment when the two Israeli *ugdot* conducting the offensive had begun to wheel to the northeast, exposing an open flank to the arriving Iraqi forces.<sup>82</sup> Thus on the morning of 12 October 1973 Israeli General Dan Laner peered through his binoculars to scan the area to the south and saw the lead elements of the Iraqi 3rd Armored Division driving cross-country toward his wide-open flank--just when his tanks had broken through the Syrian defenses, had found some room to maneuver and were building up momentum to turn the Syrian defense line anchored on the town of Sasa. Laner immediately reined in his armor--much to the dismay of his troops--and redeployed them on a group of hills that formed an inverted "V" facing south. The sudden diversion of Laner's *ugdah* forced the Israelis to call off their offensive.<sup>83</sup>

Two brigades of 3rd Armored Division were present on 12 October: the 8th Mechanized Brigade and the 12th Armored Brigade. Nevertheless, for reasons unknown, the Iraqis only committed the 12th Armored Brigade to an attack on the Israelis, and this they were unable to do until late in the afternoon. By that time, Laner's four understrength and thoroughly exhausted armored brigades (about 200 tanks in all, mostly Super-Shermans) had dug-in on the hills and were waiting for the Iraqi assault.<sup>84</sup> The 12th Armored Brigade deployed about 100 T-55s for the attack (one of its tank battalions had not arrived yet) and an equal number of APCs. The brigade did not attempt to maneuver or outflank the Israelis but drove slowly into the mouth of the inverted-V of hills, walking right into Laner's trap. When the Iraqis were 200 yards away from the forwardmost Israeli tanks, the Israelis opened fire. The 12th Armored Brigade was butchered in the ensuing melee, as Israeli tanks either picked off the T-55s from hull-down positions on the hills or maneuvered onto their flanks to get shots at the more vulnerable side and rear armor of the Iraqi tanks. The Iraqi tankers fired madly in every direction before eventually turning and running off the battlefield. The 12th Armored Brigade lost about fifty tanks in the battle.<sup>85</sup>

The Iraqis remained in contact with the Israeli forces for the next several days but chose to forego another assault until they could concentrate additional forces for the effort. Nevertheless, by 15 October, 12th Armored Brigade had lost nearly eighty percent of its tank strength as a result of the 12 October attack and subsequent skirmishes with the Israelis. The brigade was pulled off line, and did not return to combat during the war. The rest of 3rd Armored Division had arrived by that time, and of greatest importance, its 6th Armored Brigade took the place of 12th Armored Brigade on the Iraqi lines. In addition, the Jordanian 40th Armored Brigade had also arrived to bolster Syria's defenses, and it was placed under Iraqi command and deployed on their left flank.<sup>86</sup>

On the 16th, the Iraqis took another shot at the Israeli positions. The Jordanians began moving forward at dawn, as ordered, but the Iraqis did not, with the result that the

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<sup>82</sup> An *ugdah* (plural *ugdot*) is an Israeli division-task force composed of at least one combat brigade, but with a completely flexible organization that is determined by the mission to be performed and the forces available.

<sup>83</sup> Dupuy, p. 467; Chaim Herzog, *The Arab-Israeli Wars*, (NY: Random House, 1982), p. 300; Ofer, pp. 89-91.

<sup>84</sup> Laner's brigades had been in almost continuous combat for six days by 12 October, having helped drive the massive Syrian invasion force off the Golan before plunging into Syria itself.

<sup>85</sup> Dupuy, p. 468; Ofer, pp. 91-111. Please note that Dupuy's account is inaccurate on two points: he states that the entire 3rd Armored Division attacked, and that the attack came on the morning of 13 October. Both Iraqi and Israeli accounts of the battle agree that only 12th Armored Brigade (minus one tank battalion, but plus a mechanized infantry battalion from 8th Mechanized Brigade) conducted the attack, and that it was launched late in the day on 12 October. Herzog claims that the Iraqi attack (he also says it was at full divisional strength) came during the night of 12 October. Herzog, p. 301.

<sup>86</sup> Dupuy, pp. 532-533; Ofer, 119-120.

Israelis easily dispatched the 40th Armored Brigade, sending it reeling with considerable losses. Finally, at about 1000 hours the Iraqis got going. The main Iraqi force in the attack was the fresh 6th Armored Brigade with 130 tanks, which was ordered to drive one of Laner's brigades (about 30-40 tanks) off Tel Antar, a commanding hill anchoring the extreme left of the Israeli line. The 8th Mechanized Brigade was also available and was in reasonably good shape, but was not employed in the attack. Once again, the Iraqi armor moved at a ponderous pace and drove straight at the Israeli positions behind a massive but inaccurate artillery bombardment from nine artillery and two multiple-rocket launcher battalions. Despite accurate Israeli fire, the Iraqis were determined and pressed on regardless of losses. A fierce fight developed at the base of the hill between the Iraqi and Israeli tanks, but Laner quickly detached another of his brigades to loop around behind the Iraqis and so caught them in their flank. The 6th Armored Brigade was now in a tight spot and the Iraqi division commander responded by dispatching part of the idle 8th Mechanized Brigade to help extricate the 6th Armored. The Israelis immediately pinned the Iraqi relieving force and drove it back with highly-accurate, long-range tank gunnery. Eventually, the 6th Armored Brigade was able to disentangle itself from the combat, but only after losing about 60 tanks.<sup>87</sup>

The Iraqis licked their wounds for three days before having another go at the Israelis. The Israelis used this lull to pull Laner's battered ugdah back to the Golan heights, relieving it with General Peled's better rested, though far from fresh, troops. The Iraqi effort was once again directed at Tel Antar and again was to be coordinated with a Jordanian attack farther west. The Iraqi plan was much better this time. They intended to use their special forces (SF) brigade to make a night attack against the western flank of Tel Antar, hoping they could sneak in among the Israeli tanks and knock many of them out with rocket-propelled grenades (RPGs). This attack would be supported by a mechanized infantry battalion from the 8th Mechanized Brigade to provide additional infantrymen and to provide some heavy-weapons support for the attack. Then, while the Israeli armor was fully engaged trying to fend off the infantry, the Iraqis would send the 6th Armored Brigade (replenished with tanks from 12th Armored Brigade and some from 8th Mechanized Brigade) would hit the eastern flank of the Israeli positions under cover of an enormous artillery barrage.<sup>88</sup>

The attack began well. The Iraqi special forces successfully infiltrated the Israeli lines, and began pushing up the lightly held western slope of the hill. At 0200, they were joined by the mechanized infantry battalion. They encountered a small Israeli covering force, which they surprised and easily pushed back. In the confusion and darkness, the Israelis failed to recognize the size of the force on their right flank. At dawn, the 6th Armored Brigade began its attack. The brigade was back up to around its authorized strength of 130 tanks while the Israeli brigade defending the hill was one of Laner's tired brigades (left behind because Peled's division did not have enough strength to cover the entire sector) which had been reduced to 55 tanks. Almost immediately though, things began to fall apart for the Iraqis. The artillery bombardment, although heavy, was extremely inaccurate and was not timed well with the Iraqi armored attack. Likewise, the special forces troops and mechanized infantry failed to coordinate their attack on the Israeli positions on Tel Antar with the armor assault, allowing the Israelis to concentrate their full attention on the armor. Finally, rather than trying to swing around the hill as originally intended, the 6th Armored Brigade once again attacked directly into the teeth of the Israeli defenses.<sup>89</sup>

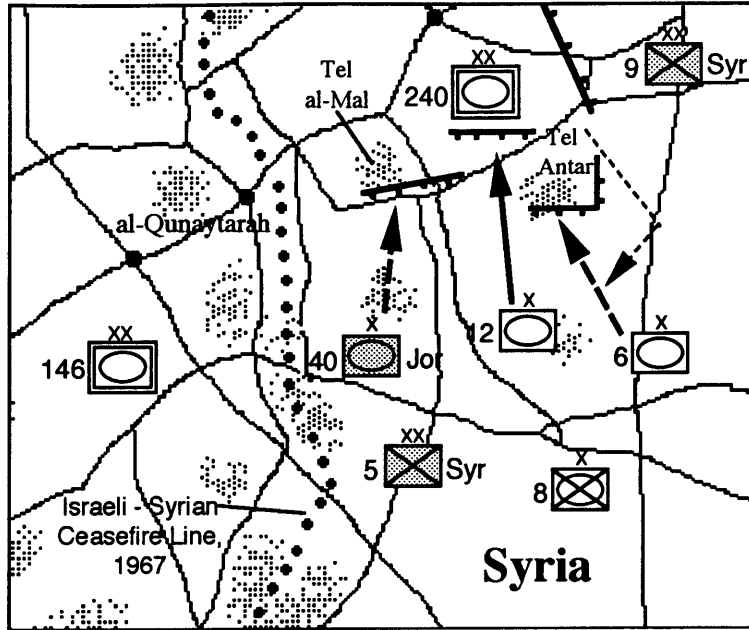
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<sup>87</sup> Dupuy, pp. 532-533; Herzog, p. 303; Edgar O'Ballance, *No Victor, No Vanquished*, 1991 Edition, (Novato, CA: Presidio Press, 1991), pp. 202-203; Ofer, 119-120.

<sup>88</sup> Dupuy, p. 534; Ofer, pp. 139-142.

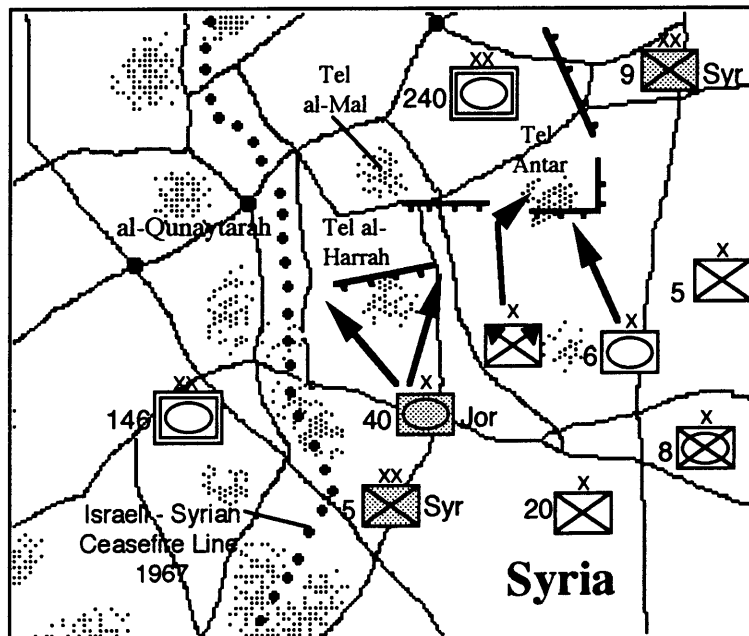
<sup>89</sup> Dupuy, p. 534; Herzog, pp. 303-304; and Ofer, pp. 139-148.

### Iraqi Attacks on 12 and 16 October 1973



- Arab Attacks, 12 October
- - - Arab Attacks, 16 October
- - - Israeli Counterattacks, 16 October
- Israeli defensive lines
- - Iraqi Units
- ◻ - Israeli Units
- ◼ - Allied Arab Units

### Iraqi Attacks on 19 October 1973



- Arab Attacks, 19 October
- Israeli defensive lines, 19 October
- - Iraqi Units
- ◻ - Israeli Units
- ◼ - Allied Arab Units

The Iraqi tanks and APCs charged straight at the Israeli lines without stopping to dismount the infantry from their APCs. Having been virtually untouched by the Iraqi artillery barrage, Israeli infantry began picking off Iraqi tanks with French SS-11 anti-tank guided missiles (ATGMs). The Iraqis still did not dismount any of their infantry to deal with the Israeli ATGM teams but kept pressing forward with the tanks in the lead, until Israeli artillery got their range and began to bust up their formations. Between the missiles and the artillery, the 6th Armored Brigade began taking heavy casualties and retreated back to their lines. In so doing, however, they left the special forces brigade and the mechanized infantry battalion stranded on the west side of Tel Antar. The Israelis quickly turned their full attention on these units and drove them off the hill with a combined force of armor and infantry, inflicting heavy losses on the Iraqis.<sup>90</sup>

Remarkably, the Iraqis continued to attack the Israeli positions. At 1000, 6th Armored Brigade again formed up and headed north toward Tel Antar. This time, the Jordanian 40th Armored Brigade also began moving against the right flank of Peled's division. Moreover, in this attack, the mechanized infantry led the assault supported by inaccurate but heavy covering fire from their armor. Nevertheless, the Iraqis insisted on once again charging directly at the strongest point of the Israeli lines. The Iraqi attack succeeded in reaching the Israeli positions out of sheer determination, but in two hours of close combat, they were again thrown back.<sup>91</sup>

At 1400 hours the Iraqis launched a third and final assault on the Israelis on Tel Antar. Once again, the attack was conducted by 6th Armored Brigade, but for some reason the Iraqis chose to lead with their tanks and have the infantry follow, despite their greater success in the second attack when they had done the reverse. For their part, the Israeli brigade was badly worn down and low on ammunition from the Iraqi attacks, and to conserve ammunition they allowed the Iraqi forces to approach much closer before opening fire. Once again a ferocious fight developed between the Iraqis and Israelis, but again, the tactical skills of the Israelis quickly gave them the upper hand. In addition, because the Jordanian attack had by then been defeated and was no longer a threat, Peled released his reserve armor force and used it to hit the Iraqis in the flank. This Israeli counterattack routed the Iraqis, sending them back south for the last time. Altogether, 6th Armored Brigade lost 70 tanks and a large number of infantry in the day's fighting.<sup>92</sup>

### **General Observations on Iraqi Military Performance During the October War, 1973**

Of the four Arab armies whose forces saw the lion's share of combat during the October War, Iraq's almost certainly performed worst. Trevor Dupuy concluded that Iraqi performance not only was worse than that of any of the other Arab armies participating in the October War, it was considerably worse than the performance of any of the Arab armies that participated in the even more lop-sided Israeli victory in the Six-Day war in 1967.<sup>93</sup> In fact, Iraq's operations were so badly conducted that after the attacks on 16 October, the Jordanians demanded that their 40th Armored Brigade be resubordinated to the Syrian 5th Infantry Division (holding the other side of the Jordanian sector) because they were fearful of operating with the Iraqis any longer.<sup>94</sup> The official Israeli assessment concluded that Baghdad's forces proved so incapable of conducting a competent offensive that, "in effect, the Iraqis were banging their heads against a wall."<sup>95</sup>

The performance of Iraq's tactical forces was awful in virtually every category of military effectiveness. Iraqi intelligence was non-existent. At no point during the battle

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<sup>90</sup> Dupuy, p. 534; Herzog, pp. 303-304; and Ofer, pp. 139-148.

<sup>91</sup> Dupuy, p. 534; Herzog, pp. 303-304; and Ofer, pp. 139-148.

<sup>92</sup> Dupuy, p. 534; Herzog, pp. 303-304; and Ofer, pp. 139-148.

<sup>93</sup> Dupuy, 626-632.

<sup>94</sup> Dupuy, p. 533; Ofer, p. 225.

<sup>95</sup> Ofer, p. 14.

did the Iraqis possess a reasonable understanding of the size or disposition of the Israeli forces in front of them because they consistently failed to aggressively reconnoiter and probe Israeli lines. For the most part, the Iraqis only initiated contact with Israeli forces during their major attacks, being content to sit in their defensive positions at other times. Iraqi officers occasionally performed commanders' reconnaissance, but always from a great distance. Those Iraqi artillery units that did fire, rarely struck Israeli targets, to a great extent because they had not correctly located Israeli positions. Indeed, Iraqi intelligence was so poor that entire Iraqi formations never fired on the Israelis during two weeks of combat--even with mortars or artillery--because they had no idea where the Israelis were. The one time the Iraqis succeeded in attacking an exposed Israeli flank (the special forces attack on the night of 18/19 October) they stumbled onto this sector by accident, and then squandered their good fortune by failing to aggressively attack into the flanks of the Israeli positions defending the southern face of the hill.<sup>96</sup>

Iraqi division and brigade commanders consistently failed to make use of the various advantages they possessed. In particular, they were never able to mass all of their forces for an assault against the Israelis. In every attack they launched they could not concentrate more than a reinforced brigade for the operation. This despite the fact that plenty of other units were available. On 12 October they employed only 12th Armored Brigade when 8th Mechanized Brigade was also available. On 16 October they employed only 6th Armored Brigade when 8th Mechanized Brigade and 20th Infantry Brigade were also available. On 19 October the Iraqis primarily employed 6th Armored Brigade (although the Special Forces Brigade participated in the first attack on that day), but again 8th Mechanized Brigade and the 30th Armored Brigade of the 6th Armored Division were also available. Moreover, in those attacks when more than one brigade was attacking under Iraqi command (primarily when the Jordanian 40th Armored Brigade was participating, but also when the Special Forces Brigade participated) the Iraqis were incapable of coordinating the timing of their movements to execute an effective attack.<sup>97</sup>

Even with these various problems, the Iraqi attacking forces invariably outnumbered the Israeli defenders in their attack sector, and usually by a wide margin. Despite this advantage, Iraq's combat forces performed extremely poorly. Iraqi junior officers showed no initiative whatsoever, consistently letting slip golden opportunities to hammer the Israelis or take important terrain features. Iraqi tank crews repeatedly demonstrated that they were simply incapable of independent action, as the death of their unit commander invariably either paralyzed them or sent them scurrying in all directions. In the words of one Israeli soldier: "Once you destroyed the leader of the herd, they didn't even know what hit them."<sup>98</sup> Iraqi tactics were rigid and unimaginative, relying on frontal assaults and virtually never attempting to defeat an Israeli foe by outmaneuvering him. Even on those few occasions when Iraq's higher commanders devised a battle plan that involved some effort to outflank Israeli positions, the poor execution of their forces turned the operations back into frontal assaults. Iraqi units failed to execute proper British bounding-overwatch movements, essentially just driving straight at the Israeli lines in two uncoordinated groupings with the result that Israeli tanks were able to pick off the Iraqis at long ranges without having to worry about covering fire from the advancing units. Iraqi tank and APC crews showed little ability to properly handle their equipment, regularly getting hung up on difficult terrain and showing little marksmanship with their weaponry. Along similar lines, Iraqi fighter aircraft did extremely poorly in air-to-air combat with the Israelis, losing 26 of 110 aircraft sent to Syria without scoring any confirmed kills.<sup>99</sup>

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<sup>96</sup> Ofer, pp. 128-165.

<sup>97</sup> Dupuy, p. 534; Herzog, pp. 303-304; and Ofer, pp. 128-165.

<sup>98</sup> Ofer, p. 96.

<sup>99</sup> Dupuy, pp. 532-534; Herzog, pp. 303-304; O'Ballance, *No Victor, No Vanquished*, pp. 317-318; and



Combined arms were an interesting problem for the Iraqis. In general, they seemed to recognize the need to integrate armor, infantry, artillery, and other supporting forces into combined arms teams, but lacked any sense of how to do so. Iraqi commanders switched off between having infantry lead and armor lead almost at random. Of greatest importance, the Iraqis did not seem to realize that they had gotten it right during their second attack on 19 October--when they had the infantry lead and the armor support, so that the infantry could close with the Israeli anti-tank teams before they cut the Iraqi armor to pieces--because two hours later they switched back to having the armor lead. Iraqi infantry units generally failed to provide adequate support to tank units. Iraqi armor did somewhat better supporting infantry operations, however, given their poor understanding of tank tactics and operations, it is doubtful that this reflected an actual understanding of this role on the part of the Iraqi tank crews. Finally, Iraq's artillery generally seemed to be fighting its own war altogether. As noted above, a portion of the blame for this must be assigned to the utter lack of reconnaissance and other intelligence operations. By the same token, there were plenty of occasions when Iraqi artillery fired at targets that they had fired at many days in a row, and which their maneuver units had attacked on multiple occasions, yet they still could provide only very inaccurate fire support, and could only provide fire as part of the pre-planned preparatory bombardment. On those rare occasions when Iraqi artillery tried to provide on-call fire support to units engaged in combat, their rounds landed everywhere but only rarely on the Israelis. Indeed, there is some reason to believe that Iraqi artillery may have caused more casualties to their Jordanian and Syrian allies than to their Israeli opponents.<sup>100</sup>

There were, however, a few bright spots to Iraq's performance. The first was the logistical effort, which while not flawless, was extremely impressive. The second was the tenacity and cohesion of the Iraqi units. Iraqi units fought very poorly, but very fiercely. The Israelis noted that the Iraqis were far more motivated than their Jordanian allies, and remained so despite appalling losses.<sup>101</sup> In many assaults, the Iraqis just kept attacking regardless of how intense or accurate the Israeli defensive fire. Eventually, the Iraqis were able to inflict considerable casualties (by Israeli standards) on several Israeli brigades by attacking repeatedly and simply refusing to give up. The fight put up by 6th Armored Brigade on 19 October is probably the best example of this as the Israelis were simply amazed that after being beaten back with heavy losses twice that day, the brigade remained cohesive and motivated and launched yet another attack with as much determination as the first. Given this tenacity and their quantitative advantages, it is clear that if the Iraqis had had any tactical skill whatsoever they might have done very substantial damage to the Israelis.

### **The Kurdish Revolt: Part II, 1974-75**

When negotiations between Baghdad and the Kurds broke down in 1974 there was little reason to believe that the Iraqi armed forces were any more likely to defeat the Kurds than had been the case four years before. During the renewed fighting, Iraqi forces demonstrated that they were just as inept tactically as they had been when they were repeatedly humiliated by the Kurds in the 1960s. The Iraqis knew the right strategic approach to defeat the Kurds, but their forces simply could not implement this strategy. There had been no change in other factors concerning the Iraqi military either: commissarism remained pervasive, the Soviet influence remained low, and the socio-

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Ofer, pp. 128-165.

<sup>100</sup> Dupuy, pp. 532-534; Herzog, pp. 303-304; O'Ballance, *No Victor, No Vanquished*, pp. 317-318; and Ofer, pp. 128-165.

<sup>101</sup> Ofer, p. 207.

economic level of most of Iraq's soldiery had improved little since 1970. Yet the Iraqis did beat the Kurds in 1975, and almost did it in 1974. The reason for this dramatic reversal lay mostly in the change in Kurdish tactics which played into the hands of the Iraqi armed forces completely. Thus Iraqi performance remained constant from its past experiences, and only the Kurdish shift brought them victory.

### **Background to the Renewed Fighting**

After four years of broken promises, the Kurds resumed their war against the Ba'thist government.<sup>102</sup> The Kurds had not been idle during that period, suspecting that the Iraqis would not carry through on their part of the agreement. Barzani had diligently recruited and trained additional men so that by the spring of 1974 he commanded 50-60,000 Peshmerga and another 50,000 irregulars. Barzani's forces were now at least three times stronger than they had ever been before. This new strength, plus the memory of their victories in 1966 and 1969, led Barzani to decide to convert the Peshmerga into a conventional army, and they spent much of this time learning conventional operations. In addition, Barzani had assiduously cultivated ties to Iran, the US, and Israel, none of whom were particularly fond of the Iraqi regime. With his vast new army and these powerful new friends, Barzani was practically itching for a fight by 1974.<sup>103</sup>

Baghdad had also made use of the four-year lull. It is fairly clear that Saddam Husayn, who increasingly supplanted Hasan al-Bakr as the major force in Iraqi politics, had never intended to abide by the agreements of 1970, and capitulated to the Kurds only as a tactical move to allow the Iraqi Army to get over the defeats of 1966 and 1969. The Iraqis had gradually built up their strength opposite the Kurds and by 1974 had massed 90,000 men, 1,200 tanks and APCs, and 200 combat aircraft.<sup>104</sup> Moreover, Baghdad's commanders had learned several lessons from their first round with the Kurds, and while their experience in the October War was equally painful, they learned from that as well.

The first thing that the Iraqi military learned was that Soviet equipment and methods did not suit their needs. The Ba'thists had always had a stormy relationship with Moscow, and between frequent Soviet attempts to influence Iraqi policy by holding up arms deliveries, and the Iraqis' conclusion that Soviet weaponry was inferior to Western equipment, Baghdad consciously began to distance itself from the USSR.<sup>105</sup> Trade with the Soviet bloc dropped from 13 percent of total Iraqi trade to 7 percent in 1975, and down to under 3 percent in 1980.<sup>106</sup> The Iraqis also tried very aggressively to obtain Western military material. In 1976, Baghdad bought 64 Mirage F-1s, and in 1977 it bought 200 AMX-30 tanks from France. In 1978, Iraq bought 200 Cascavel APCs from Britain and ordered ten frigates and corvettes from Italy.<sup>107</sup> The Iraqis wanted to buy even more than this--many Iraqi generals wanted to abandon the Soviets altogether and make a wholesale changeover to Western arms--but several factors conspired to prevent this. First, Iraq was the constant enemy of two of America's staunchest allies, Israel and Iran, and this limited the amount and quality of weapons that any Western country, even France, was willing to sell. Second, Western weapons were considerably more expensive than Soviet arms, and took far longer for Iraqi personnel to learn to use. Third, Iraq regularly went to war during this period, and they were unwilling to risk such a large-

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<sup>102</sup> Not just broken promises either: Barzani narrowly escaped an assassination attempt in 1971 probably ordered by Saddam Husayn, but possibly ordered by Jalal Talabani. Izady, p. 68.

<sup>103</sup> Izady, p. 68; Sluglett and Sluglett, p. 168.

<sup>104</sup> Sluglett and Sluglett, p. 169.

<sup>105</sup> Marr, p. 192; Haim Shemesh, *Soviet-Iraqi Relations, 1968-1988*, (Boulder, CO: Lynne Reinner Publishers, 1992), esp. pp. 10, 122-162, and Chapter 2; Sluglett and Sluglett, pp. 179-181.

<sup>106</sup> Sluglett and Sluglett, p. 181.

<sup>107</sup> Sluglett and Sluglett, pp. 179-181; and William O. Staudenmaier, *A Strategic Analysis of the Gulf War*, (Carlisle Barracks, PA: Strategic Studies Institute, US Army War College, Jan. 1982), p. 13.

scale change in the midst of combat operations.<sup>108</sup>

Although Iraq had never adopted Soviet practices to the same extent as the Syrians and Egyptians, they had made a number of changes in accord with Soviet doctrine, particularly in the air force. After the October war, Iraq abandoned many of the Soviet methods it had acquired. Baghdad never had Soviet advisers attached to its operational units in the manner of Egypt and Syria, but there were Soviet instructors who trained Iraqi personnel in certain operations. These were all sent home, and only those Soviets needed to teach weapons instruction and technical subjects were retained.<sup>109</sup> In most cases, the Iraqis went back to their original British-based doctrine, in other areas--such as unit organization, air defense and logistics--the Iraqis welded together Soviet and British practices. Finally, in a number of important categories they developed their own tactics based on their experiences in combat with the Kurds and the Israelis.<sup>110</sup>

The most important of these indigenous developments was the change in their offensive doctrine. The consistent fiascoes they had undergone with headlong frontal assaults finally convinced them to abandon this as an offensive doctrine. Instead, they adopted a doctrine of overwhelming firepower. Rather than charging a position as had been their previous practice, Iraqi forces were trained not to assault a well-defended objective at all, but to dig in immediately and then call in massive firepower from tanks, artillery, mortars, multiple-rocket launchers, and close support aircraft to obliterate the source of resistance.<sup>111</sup>

The Iraqis had also made several other changes based on their previous experience with the Kurds. Iraq had improved its logistics capability to prevent the Kurds from successfully implementing the isolation strategy that had worked so well for them in 1962-1970. To some extent, Iraq's logistical feats during the October war were the product of these reforms. The Iraqis identified additional problems as a result of the 1973 experience, especially in their mobility assets, and moved to correct these problems, such as buying nearly 2,000 HETs. Baghdad's generals also had learned to concentrate overwhelming numerical superiority against a specific sector, rather than dissipating their strength across the entire front. Thus when war broke out again in Kurdistan, they had concentrated virtually the entire Iraqi army in the north with the weight of their force deployed against the vital eastern sector. The Iraqis also had quietly built 700 miles of new roads in Kurdistan, mostly under the pretense of showing their goodwill to the Kurdish people by helping to improve Kurdistan's rudimentary transportation infrastructure. These new roads allowed the Iraqi military rapid entry into formerly inaccessible regions of Kurdistan. Finally, the Iraqis learned to be remorselessly brutal to the Kurds. While their past treatment had been far from humane, the Iraqi military prepared to wage a vicious, scorched-earth campaign against the Kurdish population.<sup>112</sup>

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<sup>108</sup> O'Ballance, *The Kurdish Revolt*, pp. 144-147; Sluglett and Sluglett, p. 181.

<sup>109</sup> Christopher Bellamy, *Expert Witness: A Defence Correspondent's Gulf War, 1990-1991*, (London: Brassey's, 1993), p. 7; Lt. Colonel Sergey Ivanovich Belzyudnyy, "Former Soviet Adviser Describes Experiences in Iraq: I Taught Saddam's Aces to Fly," (from *Komsomolskaya Pravda*, 23 February 1991), in JPRS-UMA-91-014, 5 June 1991, p. 62; Anthony Cordesman and Abraham Wagner, *The Lessons of Modern War, Volume II: The Iran-Iraq War*, (Boulder, CO: Westview, 1990), p. 60; Norman Friedman, *Desert Victory*, (Annapolis, MD: Naval Institute Press, 1991), p. 270; Ofer, p. 25; Brig. General Robert H. Scales, Jr., *Certain Victory*, (Washington, DC: Office of the Chief of Staff, US Army, 1993), pp. 113, 235-236; Staudenmaier, *A Strategic Analysis of the Gulf War*, p. 6; Wagner, p. 77; and author's interviews with US military personnel, December 1993.

<sup>110</sup> William Staudenmaier, "Iran-Iraq, (1980-)," in Robert Harkavy and Stephanie Neuman, *The Lessons of Recent Wars in the Third World, Volume I*, (Lexington, MA: Lexington Books, 1986), p. 218; and Wagner, p. 67.

<sup>111</sup> Staudenmaier, "Iran-Iraq," p. 218; and Wagner, p. 67.

<sup>112</sup> Marr, p. 233; Sluglett and Sluglett, pp. 169, 297 (note 81); Wagner, p. 63.

### Course of Operations

The Kurds moved first, launching attacks across Kurdistan against government-held towns and military bases in April 1974. The Iraqis were taken by surprise and had to fall back in many places, but the Kurds still lacked the heavy weapons to force the Iraqis out of their heavily fortified positions. As a result, the Kurdish offensive quickly ran out of steam. During the summer, the Iraqi army counterattacked, setting in motion its long-planned offensive.<sup>113</sup>

While Iraq's strategy was very similar to those it employed in 1966 and 1969, the change in their tactics, coupled with the change in Kurdish tactics suddenly produced a very different result. Instead of walking blindly into Kurdish ambushes and charging madly at heavily-defended Kurdish positions, the Iraqis inched forward and whenever they encountered resistance they called in tremendous firepower to level whatever lay in front of them. Of crucial importance to the success of this doctrine, however, was that instead of retreating back into the mountains after contacting a superior Iraqi force, the Kurds now tried to stand and slug it out with the Iraqis. Tactically, the Kurds were no better than the government troops (not surprising since they were being trained mostly by deserters from the Iraqi Army), but they could not possibly match the firepower the Army could bring to bear. Consequently, Kurdish units stood and fought and were blown to bits by the Iraqis. The Iraqi tactics were hardly elegant, but with the cooperation of the Peshmerga, they got the job done.<sup>114</sup>

By early 1975, Iraq was threatening to annihilate the Kurdish resistance. Iraqi forces had cleared the areas around Kirkuk, Arbil, and as-Sulaymaniyyah. They had used the new road network to push deep into Kurdistan toward the Iranian border, capturing Rawanduz and even Qal'at Dizah, effectively splitting Kurdistan in half--a goal they had been unable to accomplish in 1966 or 1969. The Peshmerga had suffered heavy casualties and were in danger of losing their supply links to Iran. Kurdish civilians were suffering mightily as well, as the Iraqis were equally willing to use their new affectation for overwhelming firepower against Kurdish villages as well as Peshmerga defensive positions.<sup>115</sup>

This turn of events panicked the Iranian government. The Iraqi Kurds were a very useful tool for Tehran: they kept the Iraqi Army occupied, and were a thorn in Baghdad's side that the Shah could press whenever he pleased. Iran was not about to forfeit these advantages, and cranked up its military aid to the Kurds. Iran began supplying the Peshmerga with anti-aircraft weapons, modern artillery pieces, anti-tank weapons, and more powerful infantry weapons such as heavy machine guns and heavy mortars. At Iran's urging, the US and Israel provided weapons and intelligence to the Kurds.<sup>116</sup> When even this seemed inadequate the Shah began dispatching Iranian soldiers to fight with the Peshmerga, and then began to provoke clashes with the Iraqi military along their border to try to force Baghdad to divert its forces south to ease the pressure on Kurdistan.<sup>117</sup> These drastic measures finally stalemated the war in the spring of 1975.<sup>118</sup>

Although the Iraqis were furious with Iran's "meddling" they decided to cut a deal. Despite its early successes against the Kurds, Baghdad recognized that its military was no

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<sup>113</sup> Izady, p. 68; Marr, p. 233; Sluglett and Sluglett, pp. 169-170, 297 (note 81).

<sup>114</sup> Izady, p. 68; Marr, p. 233; Sluglett and Sluglett, pp. 169-170, 297 (note 81); Staudenmaier, "Iran-Iraq, (1980- ), p. 6; Wagner, p. 63.

<sup>115</sup> Izady, p. 68; Marr, p. 233; Sluglett and Sluglett, pp. 169-170, 297 (note 81).

<sup>116</sup> Izady, p. 68.

<sup>117</sup> This is not to suggest that the various claims Iran cited as justification for their military activities were insubstantial to Tehran. Quite the contrary, many of these claims, particularly their claim to jurisdiction over half the Shatt al-Arab were very important to the Iranians. The point is only that the timing of these moves was a direct response to Iraqi success in Kurdistan. That is, Iran wanted to beat up the Iraqis a bit and so chose this moment to forcibly press legitimate grievances as the excuse to do so.

<sup>118</sup> Izady, p. 68; Marr, p. 233; Sluglett and Sluglett, pp. 169-170, 297 (note 81).

match for the Shah's armed forces. The Shah's army was more than twice the size of the Iraqi military and it was supplied with the latest American weaponry--the very weapons Iraq coveted. Moreover, Saddam Husayn had concluded that it was only Iranian support that had saved the Kurds, and if he could strike a deal with Iran that would end that aid, he was certain he could finish off the Kurds once and for all. Thus Iraq agreed to a solution worked out in the 6 March 1975 Algiers Accord, by which both sides agreed to the borders set in the 1913/1914 Constantinople Protocol, the Iranians agreed to cease supporting the Iraqi Kurds, and the Iraqis agreed that the international border would run through the middle (the *thalweg*) of the Shatt al-Arab.<sup>119</sup>

In the words of Phebe Marr, "The Algiers settlement was little short of a disaster," for Barzani and the Peshmerga.<sup>120</sup> Within hours of the signing of the agreement, Iranian soldiers began taking back the heavy weapons they had provided to the Kurds and withdrawing behind the Iranian frontier. The Iraqi offensive began the next day, and between the actual loss of their heavy equipment and the psychological devastation of their sudden abandonment, the Kurds collapsed quickly. By 2 April, the Army had sealed off the borders of Kurdistan, effectively ending that chapter of the Kurdish revolt. Under an amnesty plan, seventy percent of the Peshmerga gave themselves up to the government, while another 30,000 fled to Iran to join the estimated 200,000 refugees already there.<sup>121</sup> To prevent future recurrences, Baghdad embarked on a devastating campaign against the Kurdish population. The Iraqis resettled over a quarter-million Kurds in western and central Iraq. They also depopulated a six-kilometer wide strip all along the borders with Turkey and Kurdish Iran, razing the villages and forcing out (or killing) the villagers.<sup>122</sup>

### **General Observations on Iraqi Military Performance During the Kurdish Revolt, 1974-75**

The most important lesson of Iraqi military effectiveness during this conflict is the light it sheds on Iraqi performance in 1961-1970. In particular, it highlights the crucial role of Iraqi tactical incompetence during the first war against the Kurds. The strategy the Iraqis implemented in 1974 was virtually identical to the strategy they tried in 1966 and again in 1969. Yet the strategy worked in 1974 although it had not in 1966 and 1969. As noted above in my discussion of the first round of the Kurdish wars, the strategy itself was a good one, and when successfully implemented it worked--for the Iraqis in 1975 and 1989, and for the Turks and Iranians on several occasions. The principal reason it was successfully implemented in 1974-5 was the change in *Kurdish* tactics. In 1966 and again in 1969, the Iraqis had the right idea, but their units were incapable of executing the strategy, and were humiliated by Peshmerga employing traditional guerrilla tactics--and not employing them terribly well either. In 1974, the Iraqis were on the brink of victory not because the change in their tactics was an improvement, but because the change in Kurdish tactics was a catastrophe.

It is highly unlikely that had Barzani not made the arrogant and stupid decision to fight a conventional war, the Iraqis would have been able to effectively implement their strategy in 1974. Iraq's change to reliance on massive firepower was unlikely to have had any effect on the Kurds had the Peshmerga continued to operate as guerrillas. There are at least two pieces of evidence that support this judgment. First, setting aside the various logistical reforms the Iraqis had conducted, the only significant change they had made in their combat operations was the shift in offensive doctrine to reliance on overwhelming

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<sup>119</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 57; Izady, p. 68; Marr, pp. 233-234; Sluglett and Sluglett, pp. 169-170.

<sup>120</sup> Marr, p. 234.

<sup>121</sup> Sluglett and Sluglett, p. 188.

<sup>122</sup> Marr, p. 234; Sluglett and Sluglett, p. 188.

firepower. In other words, the Iraqis still had not learned to put out flank guards, carry out regular reconnaissance, or conduct aggressive intelligence gathering operations, strongly suggesting that, just as in 1966 and 1969, had the Peshmerga continued to employ guerrilla tactics, they would have continued to enjoy success against the Iraqis. Because the Iraqis also had not learned either to defend the high ground and stay out of the low ground or to properly integrate and coordinate the operations of their forces, it seems almost inevitable that one or more Iraqi units would have found themselves trapped and mauled by Peshmerga as happened at Rawanduz Gorge, Mt. Handrin, and on numerous other, less famous occasions. Second, reliance on overwhelming firepower against a guerrilla force was exactly the strategy employed by the US military in Vietnam, and it proved to be a very poor approach. It seems highly likely that the Iraqis would have encountered the same problems the US did: expending a lot of ordnance without doing much damage (to the guerrillas), and becoming increasingly frustrated at their inability to come to grips with the insurgents.<sup>123</sup>

Ultimately, the Iraqis prevailed despite their tactical performance. They eventually figured out the Kurds' vulnerability and developed a strategy that would allow them to exploit that weakness. However, their forces proved so inept that they only succeeded in implementing this strategy when Barzani did the one thing that could possibly have brought the Peshmerga under Baghdad's control: ordering them to stand and fight like a conventional army when they lacked the weapons and training to do so.

### **The Iran-Iraq War, 1980-1988**

The war against Iran saw dramatic changes in several of the factors purported to influence Arab military effectiveness, as well as important shifts in Iraqi combat performance itself. However, the two were not always related. The Soviet influence on Iraqi tactics and doctrine was almost completely abandoned, and while the Iraqis still relied overwhelmingly on British practices, they increasingly began to develop indigenous methods to cope with the unique features of their Iranian adversaries. During the opening phases of the war, Iraqi performance both at strategic and tactical levels was simply pathetic. In response, beginning in 1982 Saddam Husayn grudgingly depoliticized his armed forces, removing most of the commissariat measures he had imposed on it in the past. Very quickly, there was a marked improvement in Baghdad's generalship, but there was no corresponding increase in tactical capabilities. Iraq's generals eventually were able to defeat the Iranians only by rigidly scripting limited, set-piece offensives and creating a picked force--the Republican Guard--to execute these missions. Only in this way was Iraq able to mitigate its tactical problems to the extent needed to allow its enormous advantages in numbers and firepower (plus chemical warfare) to overwhelm Iran's badly depleted ground forces.

#### **Iraqi Military Developments, 1973-1980**

At the end of the October War, Baghdad inaugurated a major military build-up. The Iraqis recognized that they had not performed particularly well against the Israelis and they concluded that they needed to improve and expand their armed forces. This desire received considerable impetus from the events of 1974-1975. First, the final destruction of the Kurdish insurgency taught the Ba'thists that they could achieve policy goals by resort to military force. Second, the humiliation of having to agree to the

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<sup>123</sup> On the US experience in Vietnam and the failure of reliance on overwhelming firepower, see in particular, Andrew Krepinevich, Jr., *The Army and Vietnam*, (Baltimore: The Johns Hopkins University Press, 1986); and Russell F. Weigley, *The American Way of War*, (Bloomington, IN: Indiana University Press, 1973).

conditions of the Algiers accord in the face of Iranian military superiority, convinced Baghdad that in the Middle East only the militarily strong prosper. Thus between 1973 and 1980 Iraq doubled the size of its army (in terms of active-duty manpower), increased the number of divisions from six to twelve, of which four were now armored and two mechanized infantry. Iraq bought 1,600 new tanks and APCs, including the USSR's most modern T-72s and BMP-1s, as well as over 200 new combat aircraft, including MiG-23s and Su-22s. In addition, Iraq made a determined effort to improve its training, placing particular stress on combined arms operations and mechanized warfare.<sup>124</sup>

Baghdad also sought both to solidify its hold over the armed forces, and simultaneously reduce their responsibilities for internal security. The Ba'th, and Saddam in particular, had relentlessly "Ba'thized" the army. Although this included the indoctrination of Iraqi officers into the tenets of Ba'thism, this was mainly window dressing. As Marion Farouk-Sluglett and Peter Sluglett have observed, Ba'thism in Iraq has little to do with ideology and everything to do with power.<sup>125</sup> "Ba'thization" really meant the persistent weeding out of officers believed to be personally opposed to Saddam Husayn, and their replacement with his relatives, friends, fellow clansmen, fellow tribesmen, or fellow Tikritis--some of whom had no military experience whatsoever.<sup>126</sup> As only the most blatant example of this practice, in 1977, Saddam forced President al-Bakr to hand over the defense portfolio to Saddam's cousin and closest friend, Colonel Adnan Khayrallah.<sup>127</sup> To further guard against the possibility of a coup, Baghdad constantly and suddenly rotated the commanders of its divisions and corps.<sup>128</sup> Moreover, in 1976, the regime doubled the size of the Popular Army, the Ba'thist militia controlled by Saddam's crony Taha Yassin Ramadan, from 75,000 men to 150,000 men and began providing them with heavier weapons so that they could take over many internal security responsibilities from the Army, or protect the regime from the Army in the event of a coup attempt. The regime also continued to proliferate its security services, weaving their tentacles throughout the Iraqi military. Indeed, by 1977 Baghdad had so thoroughly politicized the military along commissarist lines that the regime began to increasingly shift its base of support from the military to its security apparatus, the government bureaucracy and the Ba'th party organization.<sup>129</sup>

Thus between 1973 and 1980, Baghdad accomplished three important goals with regard to its military. First, the regime had dramatically expanded the size and, at least in theory, the capabilities of the armed forces. Second, they had largely relieved it of its lingering internal security functions. Last, they had all but guaranteed its loyalty to the regime. There was only one problem: in so doing, they had packed the senior officer ranks with complete incompetents. Few if any of the generals leading the Army and Air Force had any combat experience, and all had been chosen for their loyalty rather than

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<sup>124</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 56-63; Edgar O'Ballance, *The Gulf War*, (London: Brassey's, 1988), p. 28; Wagner, pp. 63-68.

<sup>125</sup> Sluglett and Sluglett, in particular see pp. 171-213.

<sup>126</sup> Baram, "The Future of Ba'thist Iraq," p. 36; Cordesman and Wagner, *The Iran-Iraq War*, pp. 43-44; Heller, pp. 40-45; Makiya, p. 27; Stephen C. Pelletiere, *The Iran-Iraq War: Chaos in a Vacuum*, (NY: Praeger, 1992), pp. 42-43; Sluglett and Sluglett, pp. 206-264. One of the most important political developments during the period between 1973 and 1979 was the gradual emergence of Saddam Husayn at-Tikriti from the shadow of Hasan al-Bakr. Saddam had long been recognized as al-Bakr's right-hand man, if not the real power behind the throne. Soon after the 1968 coup, Saddam began to gather the reins of power--particularly the various security services--into his hands. In 1979, he finally forced al-Bakr to step down, and assumed the presidency himself. See Marr, pp. 215-220, 228-231; and Sluglett and Sluglett, pp. 205-213.

<sup>127</sup> Sluglett and Sluglett, p. 206. The next year, Khayrallah was promoted to the rank of General so that he could formally outrank the Chief of Staff and the corps commanders who were subordinate to him.

<sup>128</sup> Sluglett and Sluglett, p. 264;

<sup>129</sup> Heller, pp. 40-44; Makiya, pp. 26-28; Sluglett and Sluglett, pp. 206-264.

their abilities. Indeed, in a number of cases, Baghdad cashiered aggressive officers rather than promote them to general officer rank for fear they would attempt to move against the regime.<sup>130</sup> Edgar O'Ballance remarked that the Iraqi officer corps above the rank of colonel "Lacked the vision, flair, and imagination necessary to execute their responsibilities adequately, let alone with brilliance."<sup>131</sup>

If this were not enough, Saddam's lingering doubts regarding the military's loyalty led him to severely micromanage military operations to ensure that his troops--and his generals--were doing what they were supposed to. During the early years of the Iran-Iraq war, Saddam insisted on issuing orders to divisions and even brigades on occasion, and on carefully reviewing all other orders issued by his senior military commanders. Thus, Iraq's generals were constantly under the scrutiny of a paranoid dictator with little compunction about killing even devoted friends.<sup>132</sup>

### **The Invasion of Iran, 1980**

Given the limitations of Iraq's top military commanders, it should have come as no surprise that Iraq's blueprint for its invasion of Iran was poorly conceived and inadequately prepared. Baghdad's strategy was to seize Khuzhestan province in extreme southwestern Iran, just across the Shatt al-Arab from Iraq. Khuzhestan contained the bulk of Iran's oil-industry, and a significant percentage of its population were Shi'ah Arabs, whom Saddam believed he could appeal to on ethnic grounds to rise up and aid the invading Iraqi armies as their savior from Persian oppression. Baghdad labored under several other false assumptions. First, the Iraqis had been convinced by dissident Iranian military officers and their own politicized intelligence services that the Iranian army had been so debilitated by desertions and purges resulting from the revolution that Iraq's armed forces would be able to sweep them aside with little effort. Of greater importance, Baghdad was convinced that the Iranian people despised Khomeini and the mullahs and would overthrow them if given half a chance. Thus, Saddam intended Iraq's seizure of Khuzhestan province to be the spark that would ignite a new revolution, one that would oust Khomeini and replace him with a government more amenable to Iraqi interests.<sup>133</sup>

Setting aside the fact that the Iraqi plan contained no actions designed to specifically bring about this revolution but instead simply asserted that it would occur, in a purely military sense, the broad theme of the plan should have been adequate to realize Iraq's specific military goal of conquering and holding Khuzhestan. Baghdad's design called for the invasion of Iran with nine divisions. Three armored divisions, followed by two mechanized divisions would drive into Khuzhestan itself, securing the major cities, the major roads, and most important, the Zagros mountain passes through which Iranian forces would have to move to reinforce or retake Khuzhestan. Farther north, three infantry divisions, backed by another armored division, would seize the northern passes through the Zagros which the Iranians would have to use if they wanted to try to launch a counteroffensive against Baghdad. The whole operation was to be completed in 10-14 days.<sup>134</sup>

While in general terms the Iraqis had identified the right objectives and probably had allocated adequate forces to take them, the plan fell apart in the details. The specific problem was that it lacked any details. The final invasion plan was a hasty rewrite of a

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<sup>130</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 43-44; O'Ballance, *The Gulf War*, p. 49; Pelletiere, pp. 42-43; Wagner, pp. 70-78.

<sup>131</sup> O'Ballance, *The Gulf War*, p. 49.

<sup>132</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 43-45; Dilip Hiro, *The Longest War: The Iran-Iraq Military Conflict*, (NY: Routledge, 1991), pp. 42-47; Wagner, p. 68.

<sup>133</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 78-80; O'Ballance, *The Gulf War*, pp. 30-48; Wagner, p.68.

<sup>134</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 77-80; O'Ballance, *The Gulf War*, pp. 30-48.



1941 British staff exercise of a hypothetical attack to seize Khuzhestan and its oil fields with one British division. Iraq's General Staff updated the forces involved and laid out the basics of the air support, logistics, engineering and other necessary support functions, but they did so haphazardly and in many cases provided only very vague guidance. Ultimately, the General Staff relied too heavily on the calculations of the British exercise, which was a training document developed at a different time, for different forces, and with different assumptions regarding the political context.<sup>135</sup>

### *The Iraqi Preemptive Airstrike*

The British weren't the only ones the Iraqis borrowed from. Iraq began the war on September 22 with a preemptive airstrike against the Islamic Republic of Iran Air Force (IRIAF) modeled on Israel's 1967 airstrikes. However, the Iraqi Air Force command had no idea how to conduct such an operation. For starters, their intelligence picture of the IRIAF was negligent to the point of absurdity, principally because they did not bother to conduct reconnaissance missions or otherwise obtain recent information on their targets before launching their attack. Consequently, the Iraqis generally did not know which Iranian aircraft were deployed to which air bases, nor did they have a good sense of the location and capabilities of Iranian air defenses, nor did they have a good sense of Iranian air-to-air combat doctrine. The Iraqis also were unaware that Iran had built hardened aircraft bunkers (HABs) to protect their combat aircraft from enemy air attack.<sup>136</sup>

Beyond this, Iraq's air forces simply lacked the capability to execute a large-scale air offensive even had the Air Force leadership been able to plan one properly. Few of Iraq's most modern MiG-23 or Su-20/22 squadrons were operationally ready because of the inordinate length of time it was taking the Iraqis to learn to fly and maintain the aircraft.<sup>137</sup> The Iraqis had rarely tried to hit targets of military size, and had trained little to do so. During their wars against the Kurds, the air force had relied on high altitude bombing of fairly large targets, like villages, and they showed little concern for where the bombs fell. Based on their actual performance, the Iraqi air force seems to have had a sustained sortie-generation capability of about 60-70 per day, with a surge capability of about twice that number.<sup>138</sup> The Israelis, with incomparably better pilots and against an air force that was about the same size as the IRIAF but was neither dispersed nor protected by HABs, required 600-700 sorties in three hours to accomplish their feat.<sup>139</sup> The Iraqis attempted to do the same with 100 sorties conducted over an entire day.<sup>140</sup>

The airstrikes on 22 September were pitiful. Iraq failed to concentrate adequate assets against any particular target to cause serious damage. Iraqi aircraft frequently were equipped with the wrong ordnance for their assigned mission, minimizing the impact of their attacks. Iraqi airstrikes were highly inaccurate; bombs often fell so far from any military facility that the Iranians could not determine what the Iraqis had been trying to hit. In other cases, Iraqi aircraft left untouched Iranian military aircraft sitting out in the

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<sup>135</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 78-81; O'Ballance, *The Gulf War*, pp. 30-48; Arthur C. Turner, "Nationalism and Religion: Iran and Iraq at War," in James Brown and William Snyder eds., *The Regionalization of Warfare*, (New Brunswick: Transaction Books, 1990), p. 157; Wagner, p.68.

<sup>136</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 44, 60-63; Efraim Karsh, *The Iran-Iraq War: A Military Analysis*, Adelphi Paper Number 220, (London: IISS, 1987), p. 36; R. D. McLaurin, *Military Operations in the Gulf War: The Battle of Khorramshahr*, (Aberdeen Proving Grounds, MD: US Army Human Engineering Laboratory, July 1982), p. 18; O'Ballance, *The Gulf War*, pp. 43-44.

<sup>137</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 70.

<sup>138</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 84.

<sup>139</sup> Dupuy, pp. 245-247; and Ehud Yonay, *No Margin for Error: The Making of the Israeli Air Force*, (NY: Pantheon, 1993), p. 254. Yonay notes that 240 Israeli aircraft generated 1,000 sorties on 5 June 1967. However, not only does this include airstrikes against Syria, Jordan, and Iraq, it also includes combat air patrol, fighter escort, reconnaissance, and other support missions.

<sup>140</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 84.

open, instead sticking to their assigned missions of cratering runways or bombing support buildings. In these instances, the Iraqi aircraft made no effort to strafe the parked planes after they had completed their bombing runs, nor apparently did they even alert their superiors to these golden opportunities, as no additional aircraft were directed to the airbases to hit the parked Iranian planes. Iraqi pilots were extremely timid, generally conducting their attacks from high altitudes and aborting their missions in the face of rather slight resistance. To make matters worse, the air force failed to follow up its initial attacks with post-strike reconnaissance and restrikes against targets insufficiently damaged during the first attacks. By the end of the first day, Baghdad's surprise airstrike had achieved negligible damage to a handful of Iranian facilities, and overall had had no impact on Iranian military capabilities.<sup>141</sup>

The next day, Iraq lost air superiority to the crippled IRIAF. The purges of the Iranian military after the revolution had fallen most heavily on the Air Force because of its close ties to the United States. Iran's brand-new computerized logistics system was rendered inoperable by departing US personnel, paralyzing maintenance and repair work on Iranian fighters. In the chaos of the revolution, the Air Force suffered heavy desertions and there were frequent distractions from training and maintenance work. On 22 September, the IRIAF had been surprised by the Iraqi airstrikes and was able to mount only minor resistance. However, on 23 September, Iran generated 100 combat sorties and nearly swept the skies clear of Iraqi aircraft. Iraq was able to conduct only a few scattered attacks, largely on Iranian targets close to the border. Although Iraq's operational fighter strength was three to four times that of Iran, Iraqi pilots generally aborted their missions the moment they detected Iranian fighters, and in those instances when the Iraqis either accidentally or purposefully engaged in air-to-air combat, the Iranians prevailed quickly. Iran also struck Iraqi military and oil facilities. Iran's logistical problems prevented it from conducting more than sporadic raids with pairs of F-4s, but the Iraqis were stunned that Iran could even mount such operations.<sup>142</sup>

### *The Iraqi Offensive*

Iraq's ground assault was no better. Its greatest problem was that Iraqi forces moved at a snail's pace against only the most meager Iranian resistance. As a result of desertions, demoralization, purges, and other distractions, Iran had few operationally ready military forces in Khuzhestan. The 92nd Armored Division at Ahvaz was the only major Iranian formation in the area and it took several days to deploy even company-sized formations, let alone the entire division. Otherwise, the Iraqis faced tiny platoon and company-sized elements from the Iranian Army, Revolutionary Guards (IRGC), and Iranian gendarmerie who fought mostly with small arms and without any central direction. Most of the Iranian forces did not even try to delay the Iraqi invasion but retreated to the cities and other defensible positions. Nevertheless, two weeks into the invasion, the deepest Iraqi penetrations were only 65 kilometers into Iran. Whether in the mountains of the Zagros or the dry open terrain of Khuzhestan, Iraqi units advanced no more than 5-10 kilometers per day facing only scattered bands of lightly armed, and mostly untrained, Iranian defenders.<sup>143</sup>

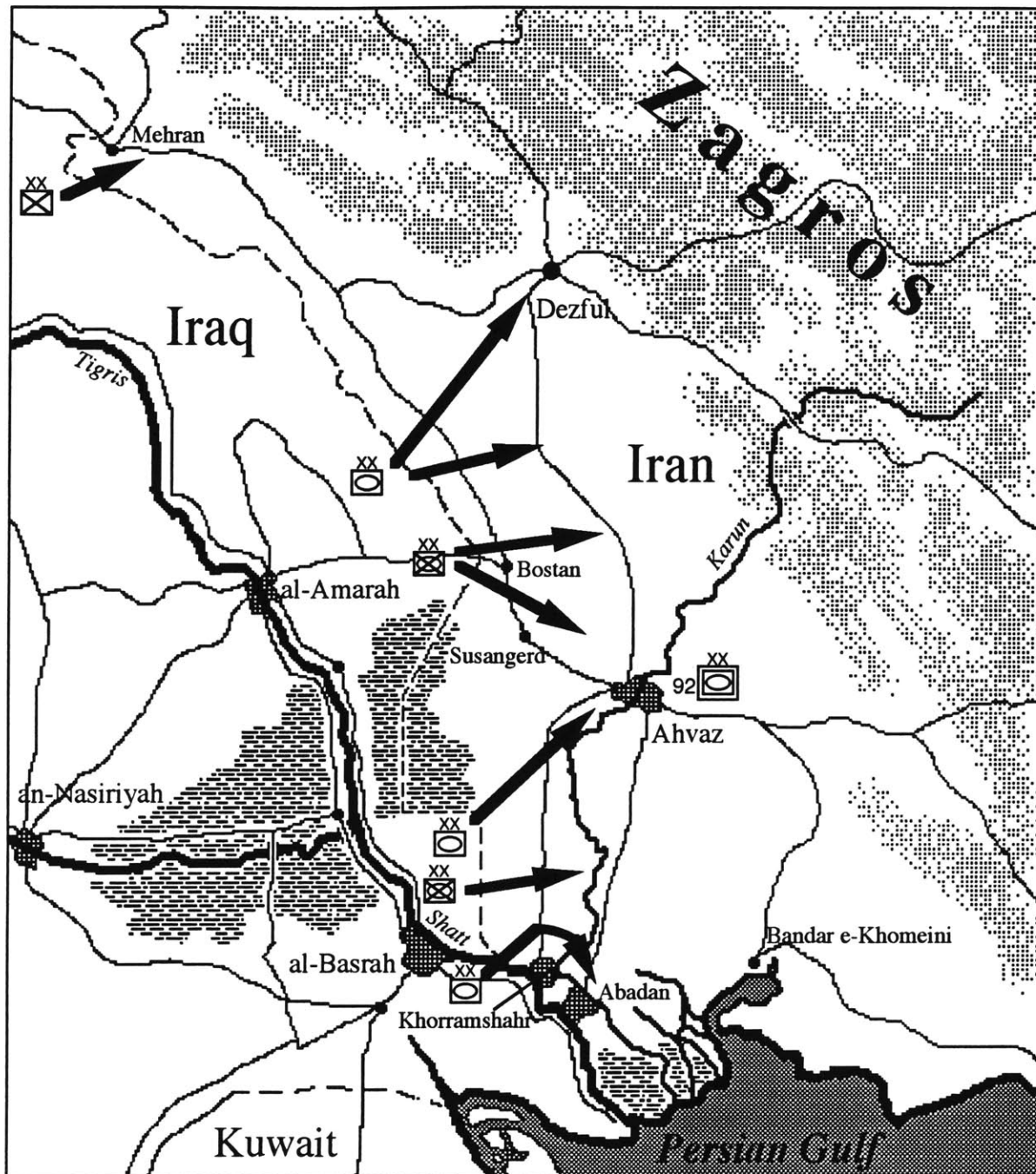
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<sup>141</sup> Maj. Ronald Bergquist, *The Role of Airpower in the Iran-Iraq War*, (Maxwell Air Force Base, Alabama: Air University Press, 1988), pp. 56-58; Cordesman and Wagner, *The Iran-Iraq War*, pp. 81-84, 98-99; Karsh, pp. 36-38; O'Ballance, *The Gulf War*, pp. 42-44.

<sup>142</sup> Bergquist, pp. 25-26; Cordesman and Wagner, *The Iran-Iraq War*, p. 84; Hiro, pp. 41-42; O'Ballance, *The Gulf War*, pp. 33-35.

<sup>143</sup> Major John F. Antal, "The Iraqi Army Forged in the Other Gulf War," *Military Review*, Feb. 1991, p. 64; Cordesman and Wagner, *The Iran-Iraq War*, pp. 79-90; Dilip Hiro, *The Longest War: The Iran-Iraq Military Conflict*, (NY: Routledge, 1991), pp. 41-42; McLaurin, p. 16; O'Ballance, *The Gulf War*, pp. 33-35; Wagner, pp. 68-70.

## The Iraqi Invasion of Iran, September 1980



-  - Iraqi units
-  - Iranian units
-  - Iraqi attacks, Sept-Nov 1980

The reason for this glacial advance was Iraq's tactical doctrine. As they had learned against the Kurds, Iraqi units relied on overwhelming firepower as their method of attack. Iraqi armored and mechanized formations would not advance until the area in front of them had been saturated with tank and artillery fire. They would then advance a short distance and then dig-in to wait for the next round of bombardment. On those occasions when they encountered Iranian resistance--no matter how light--Iraq's armor would halt, bring up engineers to build defensive positions, and then lay down a massive barrage of fire from tanks, mortars, artillery, multiple-rocket launchers, FROG rockets, airstrikes, and anything else that was available. Only when the Iranian position was a smoldering ruin would they resume their advance, only to halt again at the next sign of resistance. When Iraqi maneuver units began to approach the maximum range of their artillery support, they would stop, dig-in, and wait for the artillery to redeploy before they would resume creeping forward. In the central Zagros passes, Iraqi infantry units even added volleys of Sagger ATGMs to their barrages against Iranian roadblocks that, often as not, were undefended.<sup>144</sup>

Even as they fell further and further behind schedule, front-line commanders never varied from these tactics. Iraq's tactical leadership simply refused to show any creativity or initiative. Iraqi armored and mechanized formations never used their mobility to bypass Iranian positions, nor did they try to outflank Iranian defenses, nor did they even use their shock power to simply overrun what were almost invariably small numbers of ill-trained Iranian infantry with little or no anti-tank weaponry. John Wagner, a leading expert on the Iran-Iraq war, marvels that "no attempt was made to use fast-moving armored columns to penetrate and disrupt Iranian rear areas and to capture key objectives before the Iranians could react."<sup>145</sup> Iraqi commanders were painfully slow in committing their reserves to overpower Iranian resistance, to meet the few Iranian counterattacks, and to maintain the momentum of an advance when the lead units got bogged down or disorganized. Iraqi officers showed no aggressiveness, consistently failing to pursue defeated Iranian units, quickly overrun undefended territory, or otherwise exploit fleeting opportunities. At Dezful, Khorramshahr, Ahvaz, Abadan, and a host of smaller towns in Khuzestan, large Iraqi mechanized formations reached the outskirts of the town before the Iranians had had the chance to bring in reinforcements (and usually heavy weapons), build fortifications, or otherwise organize themselves for defense. In every case, rather than immediately assaulting the town, bypassing it and driving on toward the passes, or even encircling the town to properly besiege it, the Iraqi armor dug-in outside the town and waited for artillery fire to soften up the town. When the Iraqis finally launched their attack days later, the Iranians invariably had reinforced the garrison, created a local force of Revolutionary Guards, and built hasty defensive positions. In virtually all of these cases, when Iranian resistance made it clear that bombardment had failed to persuade the defenders to flee, the Iraqis would call off the attack and dig in.<sup>146</sup>

The one exception to this rule was Khorramshahr, where the Iraqis insisted on taking the city. They eventually did so, but it took four weeks of combat, 8,000 casualties and the loss of over 100 tanks and APCs to Iranian infantry equipped with small arms, light anti-tank weapons, and Molotov cocktails. As a result, Khorramshahr was the only city Iraq captured while it failed to secure any number of other towns and cities critical as communications nodes, transportation junctions, population centers,

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<sup>144</sup> Antal, p. 64; Cordesman and Wagner, *The Iran-Iraq War*, pp. 60, 96, 437; O'Ballance, *The Gulf War*, pp. 33-37, 209; Staudenmaier, "Iran-Iraq," p. 218; Wagner, pp. 67-70.

<sup>145</sup> Wagner, p. 70.

<sup>146</sup> Antal, p. 64; Cordesman and Wagner, *The Iran-Iraq War*, pp. 60, 96, 437; Hiro, pp. 42-43; Karsh, p. 35; O'Ballance, *The Gulf War*, pp. 33-37, 209; Staudenmaier, "Iran-Iraq," p. 218; Wagner, pp. 68-70.

garrisons, and defensive positions.<sup>147</sup>

Part of the problem can be traced to the dearth of Iraqi tactical intelligence gathering operations. Iraq's ground units just did not perform reconnaissance. Even on their numerous halts, Iraqi commanders rarely sent out patrols to scout the territory ahead. Apparently, most of the information they did receive from patrols was also extremely inaccurate. R. D. McLaurin comments that, ". . . contradictory reporting on locations, activities, and accomplishments from various elements of the Iraqi command appears to reflect communications and control problems as well as willful deception attempts. Some observers commented that lying was endemic throughout the command structure."<sup>148</sup> Nor could such failings be compensated by intelligence provided by higher echelons. Baghdad's senior leadership similarly neglected intelligence gathering. The air force had few reconnaissance aircraft, and rarely used those it had. Iraq's ability to exploit photo-reconnaissance missions was very poor and subject to severe distortion: Iraq's senior military intelligence officers reported whatever Saddam wanted to hear. Moreover, even this information was rarely disseminated to Iraq's field commanders as the senior leadership preferred to hold it as a means of maintaining authority over their subordinates. Consequently, Iraqi tactical commanders rarely knew what was in front of them, and were repeatedly caught off-guard by Iranian unit deployments and counterattacks.<sup>149</sup>

Despite their reliance on tanks and artillery fire, the Iraqis showed little ability to properly handle either. Iraq employed its tanks as mobile artillery, and nothing more. Iraqi tank crews could not fire on the move and were very inaccurate even when stopped. Iraqi tank commanders did not use the mobility of their vehicles to gain an advantage over the enemy. In armor duels, small numbers of Iranian tanks regularly outfought larger Iraqi units. In these fights, the Iraqi tanks would quickly move into a hull-down position and remain there. By contrast, many Iranian tanks would at least try to stalk their adversary in hopes of getting a flank shot. Because the Iraqis would not move from their initial position the Iranians often were able to maneuver for a better shot--and because the Iranians also were usually better marksmen--they scored more kills.<sup>150</sup>

Iraqi artillery was the mainstay of the invasion, but it proved extremely limited in its capabilities. The Iraqis did well when massing their fire against a designated position if given the time to properly register their guns. They frequently had difficulty conducting creeping artillery barrages to eliminate opposition (and suppress anti-tank teams) in front of slowly advancing armor or infantry. Moreover, they simply could not rapidly shift fire nor could they provide quick fire support to deal with unexpected developments. Finally, *every* Iraqi artillery operation required a great deal of time, a problem that eventually led Baghdad to invest heavily in multiple-rocket launchers, which at least could saturate an area with fire quickly.<sup>151</sup>

Nor could the Iraqis compensate for these problems in their individual combat arms by effectively combining them into integrated teams. As noted above, Iraqi artillery was only capable of supporting maneuver units under certain very specific conditions. Iraq continued to experience problems in coordinating the operations of infantry and armor. Tanks regularly operated without infantry support and vice versa. These

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<sup>147</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 92-93; McLaurin, entire; O'Ballance, *The Gulf War*, pp. 37-39.

<sup>148</sup> McLaurin, p. 33.

<sup>149</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 60, 80, 96, 419, 437; O'Ballance, *The Gulf War*, pp. 48, 209; Pelletiere, p. 65.

<sup>150</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 97, 437-439; McLaurin, p. 33; National Training Center (NTC), *The Iraqi Army: Organization and Tactics*, NTC Handbook 100-91, 3 January 1991, pp. 54-57; O'Ballance, *The Gulf War*, p. 49; Wagner, pp. 67-70.

<sup>151</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 447; Karsh, p. 35.

problems resulted in the Iraqis losing a significant number of tanks to ambushes.<sup>152</sup> In the most notorious example of this problem, the Iraqis not only employed an armored division to conduct the assault into the city of Khorramshahr (built on a marshy island, as if urban terrain were not bad enough for armor), but they even stripped it of its organic infantry elements before sending it in. After the division was bloodily thrown back by the Iranians, Iraq was forced to airlift in brigades of special forces and Republican Guards, give them a hasty course in urban warfare, and then send them in to take the city.<sup>153</sup>

Air support of ground forces was similarly poor. The Iraqi air force performed close air support missions infrequently, basically just contributing to the massive fire plans laid down on particularly well-defended Iranian positions. In these cases, the airstrikes had to be requested well in advance, and generally could only be called in on large targets such as towns because the Iraqi pilots lacked the accuracy to hit anything smaller. For the most part, only senior field officers could request air support, all of these missions had to be approved by Baghdad ahead of time, and the entire process was conducted through an elaborate command and control system. Thus air support was completely unresponsive to the needs of commanders on the ground. Although the air force provided sporadic and ineffective CAS, it performed virtually no battlefield air interdiction missions, hardly ever trying to disrupt Iranian units regrouping in the rear or prevent reinforcements and supplies from reaching the front lines.<sup>154</sup>

Although the Iraqi invasion was disastrous, it was not without some redeeming features. First, as always for Iraq, were the logisticians, who accomplished every task required of them. The various lessons Iraq had learned from its previous conflicts paid handsome dividends in 1980. Wary of Soviet machinations, Iraq had built an enormous stockpile of ammunition, spare parts, and other military consumables so that when the USSR slapped an embargo on Iraq during the first 8 months of the war it had little impact on Iraqi forces in the field.<sup>155</sup> After the October War, Iraq had developed a hybrid logistics system that relied on British "pull" at corps level and higher formations, but a Soviet "push" system at division-level and below. This system proved quite efficient, and the Iraqis showed considerable flexibility in adapting it to the needs of the moment. The enormous movements of troops, weaponry and supplies prior to the invasion were conducted smoothly and efficiently. Supply and transport units kept the combat units well supplied throughout the invasion, although the catatonic pace of the advance made this considerably less challenging. Nevertheless, Iraq's logistical system kept nine divisions plus support troops (a force of over 100,000 men) well-supplied for over a year in Iran without any glaring mistakes.<sup>156</sup>

The other aspect of military effectiveness in which Iraqi forces really excelled during the initial invasion was in combat engineering. During the advance into Iran, Iraqi combat engineers performed well clearing obstacles to the movement of ground forces. In particular, Iraqi river-crossing operations were very efficient. The best known of these operations was the crossing of the Karun river on 24 September as part of the advance on Khorramshahr, in which the Iraqis crossed an armored division in a single night. Later in the year, Iraqi engineers began a prodigious road building effort to link their supply

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<sup>152</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 79; Karsh, p. 35; McLaurin, p. 33; O'Ballance, *The Gulf War*, pp. 49, 198; Staudenmaier, *A Strategic Analysis of the Gulf War*, p. 18; Wagner, p. 70.

<sup>153</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 92-93; McLaurin, entire; O'Ballance, *The Gulf War*, pp. 37-39.

<sup>154</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 79, Karsh, pp. 35-39; O'Ballance, *The Gulf War*, p. 42; Staudenmaier, "Iran-Iraq," p. 225; Wagner, p. 70.

<sup>155</sup> Karsh, p. 45; Shemesh, pp. 184-188.

<sup>156</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 43, Karsh, pp. 44-45; NTC, pp. 150-151; O'Ballance, *The Gulf War*, p. 42; Wagner, pp. 63, 67-68, 78.

centers around al-Basrah with the combat units forward in Iran. These roads became crucial in keeping Iraq's forces supplied after the rains came in the late fall and turned Khuzhestan into a sea of mud.<sup>157</sup>

Finally, the Iraqi army held together and fought with an unexpected degree of commitment. Many foreign observers admitted being surprised that Iraqi units had not fallen apart when the first shots were fired. Prior to the invasion, the consensus among experts was that Iraq's military had been so thoroughly politicized and demoralized that it would fall apart under the slightest pressure. However, Iraqi units hung together and remained cohesive even in nasty fights such as the house-to-house combat for Khorramshahr.<sup>158</sup> Moreover, Iraqi soldiers often showed tenacity, courage and endurance in combat. Once again, Khorramshahr is the best example, as Iraqi soldiers determinedly slugged it out with the Revolutionary Guards in the rubble of the city and eventually cleared it. Their operations were rarely elegant, but also rarely cowardly.<sup>159</sup>

### **The Iranian Counteroffensives, 1981-1982**

By November 1980 the Iraqi invasion was over. Iranian resistance was only marginally responsible for this; Iraqi forces had outnumbered the Iranians 6:1 in Khuzhestan at the start of the campaign and Iranian units had generally opted not to try to defend Khuzhestan's open terrain, instead retreating back to the major towns and cities. Essentially, the Iraqis stopped themselves through their slow, bumbling, advance. After two months (not the 10-14 days originally planned) Iraq had failed to secure the major roads in Khuzhestan, the only city it had taken was Khorramshahr (although it briefly overran Susangerd, but then failed to garrison it and so lost it back to the Iranians), and, of greatest importance, they had failed to seal the passes through the Zagros. By early December, Iran had brought in huge numbers of reinforcements from all over the country and had cut Iraq's numerical advantage to 2:1. In addition, in late November the rains arrived in Khuzhestan and turned its relatively open terrain--criss-crossed by countless water barriers--into mud. Iraqi forces, heavily reliant on their tracked vehicles, became hopelessly road bound by the mud, making Iranian defensive efforts infinitely easier.<sup>160</sup>

By January 1981 the Iranians were ready to go on the offensive. The first attack, motivated to a certain extent by domestic political maneuverings, was an effort to push the Iraqis back from Susangerd in central Khuzhestan. It was a poorly planned and led attack that sent the three brigades of the Iranian 16th Armored Division *en echelon* into the midst of the Iraqi 6th Armored Division, deployed in hull-down positions along a group of ridge lines. The Iranian brigades had to drive forward along a single road hemmed in on three sides by the Iraqi armor. When the Iraqis opened fire, the Iranians tried to get off the road and maneuver but many got stuck in the mud, making them sitting ducks for the Iraqis. In all, the Iranians lost 200 of 300 tanks. From the Iraqi perspective, what is interesting is not that they mauled the 16th Armored Division, but that they had so much difficulty doing it. Despite having the Iranians caught in a perfect trap, Iraq still lost about 100 of the 300 tanks it committed to the battle, mostly to Iranian fire. As had been the case during the invasion, Iraq's armor refused to maneuver for advantage--or even to change positions on the firmer ground of the three hills--and Iraqi gunners displayed poor marksmanship. On the other hand, while Iranian tankers were mediocre by American or Israeli standards, they were considerably better than the Iraqis in terms of their marksmanship and aggressiveness. It remains unclear whether the Iraqi division commander had consciously deployed his forces to try to catch the Iranians in a

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<sup>157</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 94-96; Hiro, pp. 42-43; Karsh, p. 35; McLaurin, pp. 27-28; O'Ballance, *The Gulf War*, pp. 39-41.

<sup>158</sup> Wagner, p. 68.

<sup>159</sup> O'Ballance, *The Gulf War*, pp. 47-49.

<sup>160</sup> Hiro, pp. 46-47; O'Ballance, *The Gulf War*, p. 49.



fire-sack at Susangerd, or his deployment and a bad Iranian plan of attack simply created this situation by accident. Nevertheless, the Iraqis learned from the experience and later attempted to recreate the same conditions, albeit never with the same success.<sup>161</sup>

For the Iranians, Susangerd was only a temporary set-back. In September 1981, Tehran launched a major operation that successfully relieved the Iraqi siege of Abadan and largely drove the Iraqis back across the Karun river. Thereafter, in a series of five major offensives between November 1981 and May 1982, the Iranians drove the Iraqis out of Khuzhestan altogether. In these battles, Iran inflicted heavy casualties on the Iraqis including the loss of 500-600 tanks and APCs and over 200 artillery pieces, despite their superior numbers, firepower and fortifications.<sup>162</sup>

Part of the credit for these impressive operations must go to the Iranians. After the initial shock of the invasion, Iran pulled its military forces together and reorganized for defense. Former junior officers of the Shah's army were recalled and large numbers of Revolutionary Guards were mobilized, hastily-trained and sent to the front. Because the inept conduct of the Iraqi attack put relatively little pressure on most Iranian units, Iran was able to use this period to give its commanders experience and better train its troops. After initial problems, the Iranians hammered out a rough working-relationship between the regular Army and the Revolutionary Guards and developed offensive tactics whereby massed Revolutionary Guard units (filled out by the ubiquitous *Basij*, the "mobilization battalions") would conduct an attack supported by Army firepower, and then mobile Army formations would exploit the breakthrough. The Iranians learned to use infiltration tactics to get into the Iraqi defensive positions and sow havoc as part of a major attack. Later, the Iranians complemented their infiltrations with human wave assaults that, while horribly wasteful of manpower, either overwhelmed Iraqi defenses or panicked the Iraqi defenders into abandoning their positions. The Iranians consistently identified the weakest Iraqi units (frequently elements of the Popular Army that held positions in the Iraqi lines between regular Army formations) and concentrated overwhelming force against them. Iranian units, especially the Revolutionary Guards, fought with enormous ferocity, and frequently their zeal alone overcame terrified Iraqi units. Moreover, Iran's leadership from top to bottom proved fairly aggressive and imaginative, seizing opportunities as they presented themselves and confounding the Iraqis with unexpected, and frequently unorthodox, approaches. Iranian units constantly searched for weaknesses in the Iraqi lines and moved immediately to exploit them, turning minor gaps into massive holes. Once into the Iraqi rear, they moved quickly (as quickly as they could given the reduction in their mobility caused by the US arms embargo) and conducted deep maneuvers into Iraq's operational depth that frequently resulted in large-scale envelopements.<sup>163</sup>

While the Iranians fought well and their offensives were well conceived, they were hardly a juggernaut, and the results of these battles are as much attributable to Iraqi weakness as to Iranian strength. Essentially, all of the problems Iraq had experienced in its initial invasion reasserted themselves in far more pernicious forms when Iran took the offensive. While Iraq had the initiative in 1980, and Iranian forces were weak and

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<sup>161</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 108-115; Aaron Danis, "Iraqi Army Operations and Doctrine," *Military Intelligence*, April-June 1991, p. 10; Karsh, p. 35; O'Ballance, *The Gulf War*, p. 62; Wagner, pp. 68-69.

<sup>162</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 115-126, 128-133, 135-143; Hiro, pp. 52-60; O'Ballance, *The Gulf War*, pp. 78-86, 88-89, 93-102.

<sup>163</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 115-126, 128-133, 135-143; Hiro, pp. 52-60; O'Ballance, *The Gulf War*, pp. 78-86, 88-89, 93-102. This is not to suggest that Iran did not also suffer horrendous casualties. In many of the battles the Iranians took considerably more losses because of their reliance on human wave attacks. Nevertheless, given Iraqi advantages in firepower, mobility and overall strength, as well as Iranian tactics, such losses were to be expected and do not in any way offset the extent of Iraq's defeat.



disorganized, Iraq's failings were not so obvious. When Iran had reinforced and reorganized its army in Khuzhistan and then began attacking the Iraqis in full force, these problems became readily apparent.

Iraqi forces were constantly surprised by Iranian attacks, primarily because the Iraqis never performed adequate reconnaissance. Iraqi tactical formations rarely sent out patrols to see what was happening in the sector immediately in front of them, let alone long-range patrols to try to determine where Iran was massing forces for an attack. In many cases, information that was collected at tactical levels was distorted when conveyed to higher echelons, if it was passed on at all. Nor was this compensated for by strategic assets. The Iraqi Air Force continued to fly only occasional reconnaissance missions, and the readouts from these flights hardly ever made it down to the field commanders. Iraq was so negligent in its intelligence gathering operations that during the offensive to relieve Abadan in September 1981, Iran was able to move a force of 15-20,000 troops down the east bank of the Karun river directly in front of Iraqi positions on the same side of the river, without the Iraqis becoming aware of the movement.<sup>164</sup>

The Iraqis also made it relatively easy for the Iranians to penetrate their lines. First, Saddam decreed that Iraqi units could not voluntarily surrender any Iranian territory, thus Iraqi commanders were prevented from setting up on the most defensible terrain if it meant giving up conquered territory, and from retreating in combat when their positions became untenable.<sup>165</sup> Iraqi units did not guard their flanks or rear, even when not covered by other units. As a result, the Iranians frequently were able to push through undefended flanks, and once they had penetrated at one point it became relatively easy for them to roll up an entire line. Moreover, Baghdad frequently deployed Popular Army units to hold the seams between combat divisions, and the Popular Army units--poorly trained and armed--proved incapable of standing up to the Iranians.

The relative ease with which Iranian attacks were able to penetrate Iraq's front lines was particularly problematic because the Iraqis insisted on a forward defense strategy and had tremendous difficulty reacting quickly to unexpected developments. Baghdad put its armored and mechanized formations on the forward defensive lines rather than holding them back as operational reserves. Not only were there few reserves available to counter an Iranian penetration, but units elsewhere on the line frequently would not reorient themselves to deal with threats once the Iranians had penetrated their lines.<sup>166</sup> Indeed, during the Iranian offensives, Iraqi forces generally would not maneuver at all, stubbornly remaining in their prepared defensive positions, and even tactical reserves took inordinately long periods of time to reinforce a threatened sector or counterattack an Iranian penetration. When counterattacks finally did materialize, in every case, they were cumbersome frontal assaults. This despite the fact that because the

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<sup>164</sup> Cordesman and Wagner, p. 123.

<sup>165</sup> This point can only be pressed so far. Hitler also decreed that German units were not to surrender a single inch of Russian territory, but Manstein and then Guderian both responded by holding the forwardmost positions with thin infantry screens, deploying heavier infantry positions in better defensive terrain behind the front lines, and then retaining virtually all of the panzer forces as operational reserves well behind the forward defenses. Clearly Hitler's order complicated matters for the Germans just as Saddam's orders did for the Iraqis, but the German generals found a much better solution to this problem than did the Iraqis.

<sup>166</sup> Some commentators have blamed the unwillingness of Iraqi forces to reorient themselves to face an attack from an unforeseen direction to Saddam's dictat that Iraqi units not voluntarily relinquish their forward positions. This is not the case. Saddam demanded that the army hold every inch of territory they had gained, but he never specified the axes the Iraqis were to defend. Whether the attack came from the front of a position or the flank, all Saddam had ordered was that the position be held. Once again, the comparison with German forces in Russia is illuminating: despite receiving the same orders from Hitler, German units immediately redeployed to meet an attack from an unforeseen direction, nor was this seen as contravening Hitler's orders.

Iranians were so dependent on unwieldy masses of light infantry they were extremely vulnerable to armored attacks against their flanks. If the Iraqis had been able to swing even battalion-sized armored units onto the flanks of an Iranian human-wave attack, there is no question the Iranians would have been cut to shreds. While Iraq frequently had plentiful artillery support, they were incapable of redirecting fire rapidly to keep pace with the changing flow of the battlefield and could not shift fire to cover sectors that had not been assigned pre-planned fire missions before the start of the attack.

Iraq also could not show the same adaptability or flare for innovation that the Iranians wielded to advantage. Iraqi formations faced with novel Iranian approaches to combat situations normally failed to quickly develop counters to the Iranian moves. If the Iranians did not fight "by the book" (that is, the *Iraqi* "book") the Iraqis did not know what to do and usually either continued trying to overcome the Iranian stratagems with ever greater doses of firepower, or else they would panic and run. For example, it took years before the Iraqis finally developed even a crude method of handling the human-wave attacks of the Basij and Revolutionary Guards.<sup>167</sup>

Thus the Iranian offensives in 1981-1982 followed an almost formulaic course. The Iranians would mass a large force of Basij and Revolutionary Guards, supported by whatever mechanized forces and artillery the Iranian Army could scrape together, against a weak sector of the Iraqi lines--often a sector held by Popular Army units sandwiched between two Iraqi field divisions. The Iranians would launch massive human wave assaults against the Popular Army units on either side of one or more Iraqi divisions. Iraqi field commanders would take too long forming up and committing their local reserves--if they moved at all--and the Popular Army formations would be overrun. Iranian heavy forces would then pass through the gaps and push into the operational depth of the Iraqi formations, conducting deep encirclements that frequently isolated entire Iraqi combat units. The considerable hindrances to Iranian mobility, plus the fact that the Iranians too were not the greatest fighting force in the world, meant that these exploitations generally moved slowly and awkwardly. However, Iraqi commanders generally would fail to commit their operational reserves quickly, and in those cases where they did muster a counterattack, the Iraqi armor invariably launched a frontal assault without infantry support and only inaccurate and sporadic artillery fire that would be stopped cold by Iranian armor, artillery and hordes of infantry with light antitank weapons. Meanwhile, the Iraqi units on the front-line that were in the process of being encircled--which often were Iraq's best combat divisions--would frequently sit in their entrenched positions, defending when attacked, but unwilling to reorient their lines or counterattack the main Iranian threat, which was now behind them. The result was that fairly slow-moving Iranian infantry attacks supported by small amounts of armor and artillery were able to consistently punch through Iraqi defensive lines and encircle large, Iraqi mechanized formations. Indeed, at the Second Battle of Dezful in March 1982, Iranian forces outflanked and encircled Iraq's entire 9th Armored Division and inflicted such hideous losses on it that Baghdad decided to disband the division rather than reconstitute it--the only Iraqi division ever to suffer that fate.<sup>168</sup>

### **The Iranian Invasion of Iraq, 1982-1986**

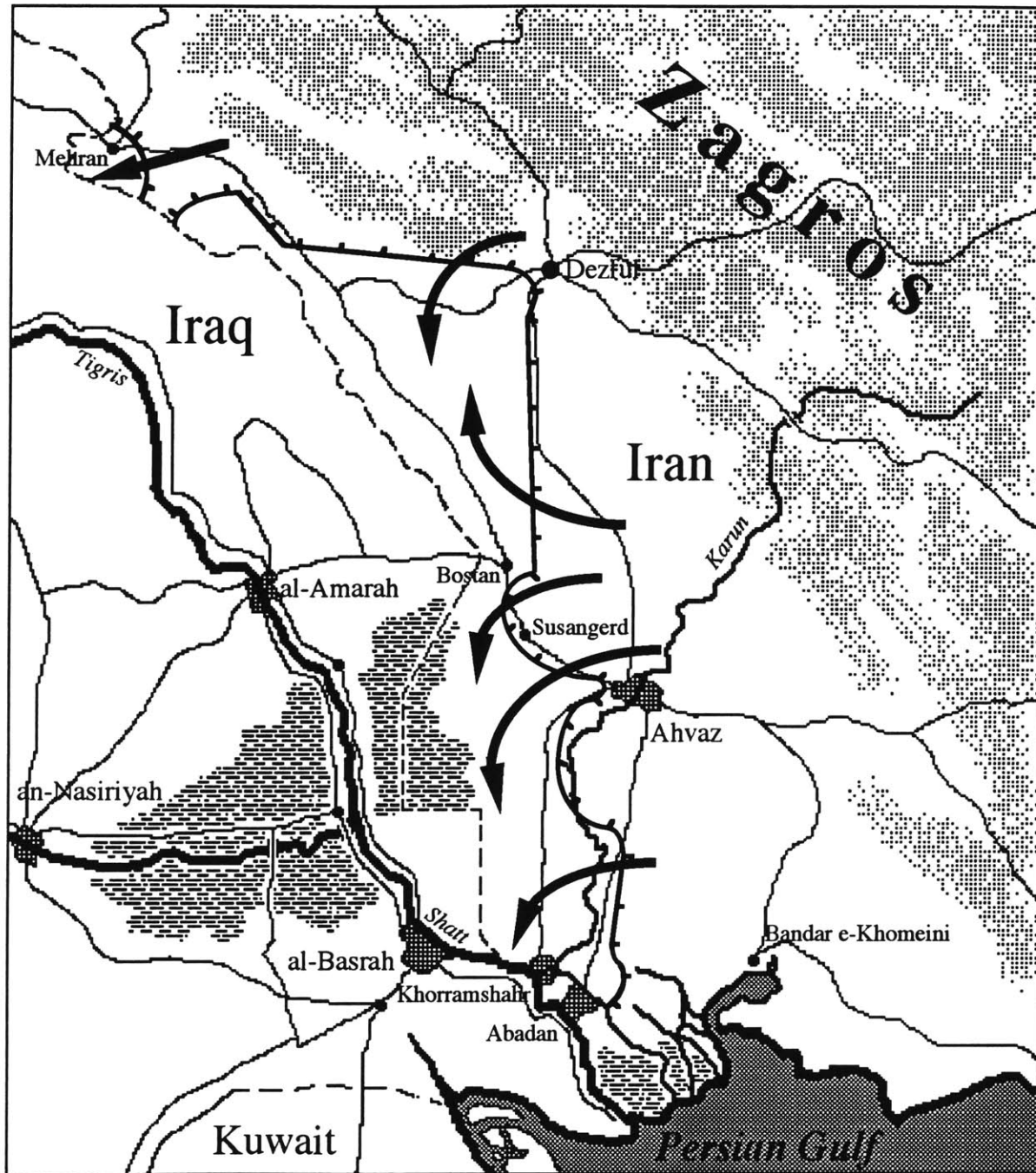
By May 24, Iran had evicted the Iraqi forces from Khuzhestan. Galvanized by these victories, Ayatollah Khomeini and his followers decided to press on to try to overthrow the Ba'thist regime and liberate the Shi'ah holy cities of Karbala and an-Najaf. In mid-July 1982 Iran launched operation Blessed Ramadan, a major offensive to take al-Basrah, the second city of Iraq. For the next four years Iranian forces would hammer

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<sup>167</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 115-126, 128-133, 135-143; Hiro, pp. 52-60; O'Ballance, *The Gulf War*, pp. 78-86, 88-89, 93-102.

<sup>168</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 130-133.

## Iranian Counteroffensives, 1981



- ← - Iranian attacks, 1981
- - - - - Iraqi front lines, January 1981

away at Iraq's defenses. Iran launched one or two major offensives every year, along with sometimes as many as a half-dozen lesser attacks. They conducted these offensives in the south against Al-Basrah, in the marshes north of al-Basrah where it was difficult for Iraqi armor to operate, and in the mountains of Kurdistan where they were aided by the remnants of the Peshmerga, reborn thanks to renewed Iranian support. While the Iranians did make gains here and there, they were slight and never of any real significance to the course of the war. This long period of stalemate was the product of a variety of factors.

After being thrown out of Khuzhestan, the Iraqi military scrambled to reorganize. While the rest of the world may have wondered as to Tehran's designs, Baghdad appeared certain that Iran intended to invade Iraq. Their first priority was the construction of fortifications to defeat the Iranians. Iraqi engineers labored all through the summer to build defenses throughout southern Iraq to defend al-Basrah, the obvious first objective of an invasion. They built two lines of defense, a forward screening line, and then a main line of fortifications several kilometers behind the first. They laid mines, strung concertina wire, built berms and defensive positions, they constructed firing ramps for tanks, built bunkers and dug artillery pits. They created water barriers to channel Iranian attacks. They cleared fields of fire in front of the lines, and built an extensive road network behind to allow the rapid movement of supplies, artillery, and reserves.<sup>169</sup>

Iraq's combat engineers continued to improve over the entire course of the war, building a very formidable line of earthworks and fortifications all along the border. The Iraqis made extensive use of flooding and water barriers to channel Iranian attacks and deter assaults on particularly vulnerable sectors. In the most extreme example, Iraq greatly expanded Fish Lake, turning a small fishery into an enormous artificial pond in the "step" of Iraq to bar any approach across the solid, open terrain of this area toward al-Basrah. They then packed Fish Lake with mines, concertina wire, and power lines that could electrocute sections of the lake. The Iraqis built an enormous new road and rail network that allowed them to rapidly shift mechanized reserves to meet sudden Iranian offensives anywhere along the front. Iraqi engineers also built multiple lines of fortifications so that when an Iranian attack broke through one line it would be confronted with another a few kilometers to the rear. By 1987, al-Basrah was ringed by no less than six concentric circles of fortifications. Indeed, by the latter half of the war, the Iraqis had learned to have their engineers begin building additional lines of defense behind a sector the moment the Iranians launched a major attack there. Thus when Iran attacked, using the same tactics they had employed with such success over the past year, the Revolutionary Guards and Basij often broke through the first line of defense only to be stopped by the main line, or by hastily constructed reserve lines behind even that.

Similarly, the defenses themselves improved slowly over time. For example, initially, Iraqi defensive lines primarily consisted of belts of individual company strong points (the well-known triangle-shaped positions) providing all-around protection, deployed three or four deep and separated by anywhere from several hundred meters to several kilometers depending on the terrain. This strongpoint system would have been useful against armor attacks, but against Iran's massed infantry, the relatively isolated strongpoints were quickly overrun. In response, the Iraqis switched to building enormous, continuous lines of berms as the main fighting positions for their troops. These berms were large enough to drive a truck across and had pre-dug positions for tanks, APCs and anti-aircraft cannon (to "hose down" Iranian human wave attacks, not to defend against air attack). These berms, which stretched for dozens, even hundreds, of kilometers proved far more effective than the triangular strongpoints.<sup>170</sup>

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<sup>169</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 149-150.

<sup>170</sup> John Bulloch and Harvey Morris, *The Gulf War*, (London: Methuen, 1989), p. 148; Cordesman and Wagner, *The Iran-Iraq War*, pp. 73, 149, 153-156; O'Ballance, *The Gulf War*, pp. 101-102; Staudenmaier, "A Strategic Analysis . . ." p. 16; and author's interviews with General Bernard Trainor, June 1994.

While Iraqi engineers were fortifying the borders, Baghdad began to try to rebuild its army. It began to conscript increasingly larger percentages of the fit male population, constantly expanding the number of men under arms and the number of combat formations available at any given time. They purchased more, and more modern, tanks, APCs, artillery pieces, anti-aircraft guns, mortars, and anything else they could get their hands on that would allow them to pour fire on the Iranian human wave attacks. In addition, they resubordinated the Popular Army brigades to the regular Army and began to deploy them only in good defensive terrain in quiet sectors.<sup>171</sup>

### *Depoliticization*

Ultimately, the most important and far reaching move Baghdad made in 1982, however, was to begin a lengthy process of depoliticization of its officer corps. The defeats in Iran apparently convinced Saddam that his commissariat politicization of the armed forces had severely hampered their effectiveness and now with Iran's victorious armies beating down the doors of his realm it was time to put military effectiveness ahead of political reliability. Thus, beginning in 1982, Saddam began to undo this damage, starting with the characteristically dramatic gesture of dismissing (and in a number of cases executing) between 200 and 300 mostly senior officers who had performed poorly in 1980-1982. Moreover, in their place, rather than appointing still more of his cronies, Saddam began promoting officers who had fought well in the opening battles.<sup>172</sup>

Depoliticization did not come quickly. Essentially, the whole process took four years, but as Saddam began to depoliticize, the Iraqis began to experience greater success and slowly the trend picked up speed. The emphasis on leadership and demonstrated performance over loyalty and personal ties increased until it became the rule rather than the exception.<sup>173</sup> Saddam went so far as to recall to service hundreds of competent junior officers formerly dismissed for suspected disloyalty (although he did not recall senior officers dismissed for suspected disloyalty).<sup>174</sup> Baghdad did away with the political officers formerly assigned to all Iraqi units above battalion-strength and ceased the practice of frequently rotating the commanders of divisions and corps. Instead, Saddam weeded out incompetent commanders (many of whom were friends, loyal supporters, and even relatives) and when he found competent commanders he stuck with them. Over time, this allowed for the emergence of a core of competent senior field commanders such as Generals Fakhri, Jabburi, Maher Rashid, and Mahmud, as well as an efficient General Staff under Iraq's highly capable Deputy Chief of Staff for Operations, General Husayn Rashid. Perhaps most difficult of all for Saddam, he slowly relinquished control over military operations and began to give greater latitude to his generals in

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<sup>171</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 149.

<sup>172</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 141-142; *The Economist*, "Iraq's Army: The Lessons from the War with Iran," Jan. 12, 1991, p. 36; Pelletiere, *The Iran-Iraq War*, p. 65.

<sup>173</sup> Indeed, in 1989 when Saddam's Defense Minister and close friend Adnan Khayrallah was killed in a helicopter crash Saddam replaced him with Abd al-Jabbar Shanshal. Shanshal was a fossil, and therefore not much of a threat to Saddam's rule, but more importantly he had been a highly respected officer and was entirely apolitical. Shanshal's appointment was a clear sign that Saddam was willing to consider military professionalism--coupled with a disinterested stance toward politics--in even the most senior military positions. Efraim Karsh and Inari Rautsi, *Saddam Hussein: A Political Biography*, (NY: The Free Press, 1991), p. 240.

<sup>174</sup> Of course, there were limits to this and Saddam generally preferred to promote sunni Arabs over shi'ah Arabs or Kurds, and a competent officer with ties to Saddam invariably had a better chance than an equally competent officer without the same connections. Indeed, Hanna Batatu has noted that, by the end of the war, Generals Maher Rashid, Sultan, Shaban, and al-Barrak (the director of military intelligence) were all members of Saddam's Albu Nasir clan. It is equally interesting to note that Maher Rashid was one of those who was quickly dismissed after the war under suspicion. Hanna Batatu, "Political Power and Social Structure in Syria and Iraq," in Farsoun ed. *Arab Society*, p. 40.

making military decisions. In turn, his generals thoroughly revamped Iraq's training practices. They began to try to teach combined arms tactics to their troops in a more comprehensive and systematic fashion and, recognizing their problems in Iran, they began to try to encourage junior commanders to be aggressive and innovative in combat and to react more quickly and effectively to Iranian moves.<sup>175</sup>

### *Iraqi Military Reforms*

Depoliticization, and the rise of the competent officers it allowed, quickly led to a noticeable improvement in Iraqi defensive strategy. Iraq abandoned its previous reliance on forward defenses. Instead, it deployed infantry well-supported by area-fire weapons along the heavily fortified lines that soon spanned the entire length of the border. Increasingly, the Iraqis concentrated their armored and mechanized infantry units into reserves that could be quickly shifted around the country to wherever Iran happened to be attacking. These heavy forces, well-supported by artillery, were used to counterattack the Iranian assaults and drive them back to their start-lines.<sup>176</sup>

Baghdad was also aided by the fact that it was now defending its own soil. Most Iraqi soldiers had little love for Iran, but hadn't been terribly interested in Saddam's plans for the conquest of Khuzhestan. While most Iraqi soldiers fought hard in Iran, they never could muster the same passion that the Ayatollah's "martyr battalions" could. However, once they had been evicted from Iranian territory and were fighting to prevent the hated Persian enemy from conquering their own land they suddenly were inspired to remarkable tenacity. Just as Saddam was disappointed that the Arabs of Khuzhestan did not rise up to welcome their Iraqi brethren, so too was the Ayatollah when the shi'ah of southern Iraq did not rise up against their Sunni oppressors. Instead, Iraq's largely shi'ah infantry formations fought hard to defend their country. Unit cohesion similarly improved. While it had been uneven in Iran, with some units hanging together under tremendous pressure and others--particularly Popular Army brigades--disintegrating with the first contact, once the venue shifted to Iraq itself, Iraqi units uniformly mustered strong cohesion.<sup>177</sup>

These various improvements on the Iraqi side were complemented by problems on the Iranian side that increasingly hindered their military operations. Iran's deficiencies in armor, artillery, airpower, and other heavy weapons increasingly took their toll. The Iraqis were able to mass more and more firepower over the years while the Iranians were able to mass less and less. This, plus the predilection of most of the mullahs for human wave attacks (relying simply on "faith" as opposed to the Iranian Army operations that required skill--skill associated with the West that is--meant that Iranian combat power increasingly rested on the Revolutionary Guards and Basij. While the human wave attacks generally were able to penetrate Iraqi defensive lines, they were slow and cumbersome and could not follow up their penetrations with swift exploitations. Moreover, once sent forward into battle, they became extremely difficult to control, thus even when Iranian commanders recognized an unforeseen opportunity, it often proved impossible to redirect the Basij to take advantage of it.

Iran's greatest liability, however, was its lack of mechanized formations and motor transport with which to exploit its successes. During the first six counteroffensives that drove the Iraqis out of Iran, the Iranians still retained enough operational tanks, APCs,

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<sup>175</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 356; *The Economist*, "Iraq's Army: The Lessons from the War with Iran," Jan. 12, 1991, p. 36; Heller, p. 46; Pelletiere, *The Iran-Iraq War*, p. 105; Scales, p. 117; William O. Staudenmaier, "Commentary: Defense Planning in Iraq: An Alternative Perspective," in Stephanie G. Neuman ed., *Defense Planning in Less-Industrialized States*, (Lexington, MA: Lexington Books, 1984), p. 54.

<sup>176</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 153-156, 159-170, 178-183, 200-205, 206-218; Hiro, pp. 86-113; O'Ballance, *The Gulf War*, pp. 93-102, 114-120, 142-148, 160-167, 173-175.

<sup>177</sup> O'Ballance, *The Gulf War*, pp. 94, 210.

self-propelled artillery pieces, and trucks to allow certain units a degree of mobility so that they were able to pass through the Revolutionary Guard breakthroughs, exploit into the operational depth of the Iraqi positions, and encircle the forward-deployed Iraqi forces. The arms embargo--as well as the oil embargo, which made it difficult for Iran to raise hard currency for arms purchases--began to pinch tighter and tighter. Iran never fully regained control over its logistics system and throughout the war teams had to pick through the massive warehouses by hand to find the parts and equipment they needed. In addition, the Iranians had eliminated the source of their major weapons systems, and were forced to scour the world for countries (and others) who had American military equipment for sale comparable to their own. Ultimately, Iran was forced to buy large amounts of Soviet-style equipment, mostly from China and North Korea. These weapons were inferior to their American arms to begin with, and the Chinese and North Korean versions generally were rotten copies that became maintenance headaches in their own right. Moreover, the proliferation of different types of weapons systems only added to the burden on the already badly strained logistics system.<sup>178</sup>

The effect of all of these mounting problems was that as the war plodded on, Iran's attacks made less and less progress against the Iraqis. The expansion of the Iraqi army and the constant construction of more and more formidable fortifications made it increasingly difficult for Iranian assaults to even penetrate the Iraqi defensive lines. The slow erosion of Iranian mobility assets made it more and more difficult for Iran to exploit the breakthroughs it was able to create. The increasingly large armored reserves Iraq held back, and the tremendous improvement in Iraq's mobility meant that Iraqi reserves were able to counterattack sooner and sooner after an Iranian attack and in greater and greater force. By the beginning of 1986, the lines had changed little since 1982, and the Iranian offensives seemed to have passed the point of diminishing returns.

### *Remaining Iraqi Tactical Problems*

Of course, it is important not to lose sight of the huge number of continuing problems in the Iraqi forces despite their increasing success in stopping the Iranians. After all, the Iraqis were employing all the weaponry available to a modern army to fight what was basically a light infantry force. The Iraqis generally outnumbered the Iranians, except temporarily at the point of attack, where the Iranians might muster an advantage in manpower for its human-wave assaults. The Iraqis could bring to bear vastly greater firepower than the Iranians and were considerably more mobile than the Iranians. Still, Iraq eventually even felt compelled to resort to chemical warfare (CW) as a way of breaking up Iranian attacks.<sup>179</sup> This being the case, the question is not why Iraq was able to stalemate the Iranians, but why it was so difficult for them to do so.

Intelligence improved in some areas, but not in others. Iraqi tactical units still paid inadequate attention to reconnaissance, and particularly to longer range reconnaissance missions that might have given a better sense of Iranian intentions. Iraq's senior commanders began to demand more Air Force reconnaissance missions, but this seems to have helped only marginally. Iraqi intelligence seems to have only really improved when Baghdad began receiving information regarding Iranian preparations and capabilities from the United States.<sup>180</sup> However, even this new source seems to have had

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<sup>178</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 153-156, 159-170, 178-183, 200-205, 206-218; Hiro, pp. 86-113; O'Ballance, *The Gulf War*, pp. 93-102, 114-120, 142-148, 160-167, 173-175.

<sup>179</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 122-517; Danis, p. 10; McLaurin, p. 29; O'Ballance, *The Gulf War*, pp. 149-150, 164, 179.

<sup>180</sup> On US intelligence-sharing with Iraq, see Capt. Michael Bigelow, "The Faw Peninsula: A Battle Analysis," *Military Intelligence*, April-June 1991, p. 16; Lawrence Freedman and Efraim Karsh, *The Gulf Conflict, 1990-1991*, (Princeton, NJ: Princeton University Press, 1993), p. 25; Michael R. Gordon and General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, (Boston: Little, Brown and Co., 1995), p. 38; *The Gulf War Air Power Survey, Volume II, Part I: Operations*,



limited impact on Iraqi fortunes because initially Saddam distrusted the Americans, and Iraqi soldiers and officers continued to distort information being passed both up and down the chains of command. Consequently, Iraqi tactical commanders rarely understood the full picture of Iranian activities in their sector available to their superiors, leading them to constantly be surprised by Iranian attacks. Similarly, lower echelons regularly claimed either that they had defeated Iranian attacks when they had not or that they were being attacked by far greater forces than was in fact the case (to justify having been defeated). The impact of this was that Iraqi strategic commanders were constantly overreacting to some threats and underreacting to others.<sup>181</sup>

Other Iraqi problems continued to manifest themselves acutely at tactical command levels. Although Saddam's grudging depoliticization led to a marked improvement in Iraqi operations at a strategic level, Iraq's tactical forces still could not effectively implement the operations devised by their senior officers. Moreover, this was despite the conscious efforts of both the regime and the senior officer corps to stimulate initiative, creativity, and independent action among their subordinates. For example, the Iraqi General Staff and Baghdad's corps commanders got very good at shifting their mechanized reserves, concentrating them against an Iranian offensive and then using them to counterattack the Iranian penetration. However, the forces themselves continued to conduct these counterattacks extremely poorly. Tactical commanders continued to rely on firepower rather than maneuver, and their counterattacks were invariably just massive frontal assaults in which Iraqi armor simply collided head-on with the Iranian forces. Even within these attacks, lower Iraqi formations rarely used maneuver and instead tended to simply line up and roll right at the Iranians, firing indiscriminately as they did. On those (increasingly rare) occasions when they encountered Iranian armor, they tended to prevail only because of overwhelming numerical superiority. Armored and mechanized units assigned to defend a given sector rarely tried to maneuver against the Iranians, despite the constant vulnerability of the Iranians to flanking armor attacks. Consistently, the Iraqis preferred simply to remain in their defensive positions and blast away. This unwillingness to maneuver led to large numbers of Iraqi tanks and APCs being destroyed by Iranian anti-tank teams armed with RPGs who swarmed over a position or infiltrated the Iraqi lines and then attacked their armor from the rear.<sup>182</sup>

As the war progressed, Iraqi senior officers, despairing that their subordinates would ever learn to use tactical maneuver, began to more carefully plan counterattacks so that they could employ maneuver at operational level. Whereas before a corps commander might order an armored division to deal with an Iranian assault in his corps sector and then leave it up to the division commander to decide how best to conduct the attack, later in the war, the corps commanders began to consciously position their reserves on the flanks of Iranian penetrations and then order specific operations. Thus even though his subordinates would likely resort to a headlong charge, they would be doing it into the flank of the Iranian force. Only by means of such constant micromanagement were the senior military officers able to employ maneuver warfare to defeat Iranian attacks.<sup>183</sup>

There was a limit to how much even the constant attention of the General Staff and corps commanders could do to improve Iraqi military effectiveness. For example,

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hereafter referred to as GWAPS, (Washington, DC: GPO, 1993), p. 64; O'Ballance, *The Gulf War*, p. 198; Pelletiere, p. 96.

<sup>181</sup> Bulloch and Morris, p. 111; Cordesman and Wagner, *The Iran-Iraq War*, pp. 153-156, 159-170, 178-183, 200-205, 206-218, 414; Hiro, pp. 86-113; Karsh, p. 39; O'Ballance, *The Gulf War*, pp. 93-102, 114-120, 142-148, 160-167, 173-175, Pelletiere, p. 65.

<sup>182</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 153-156, 159-170, 178-183, 199-205, 206-218; Hiro, pp. 86-113; O'Ballance, *The Gulf War*, pp. 93-102, 114-120, 142-148, 160-167, 173-175.

<sup>183</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 153-156, 159-170, 178-183, 199-205, 206-218; Hiro, pp. 86-113; O'Ballance, *The Gulf War*, pp. 93-102, 114-120, 142-148, 160-167, 173-175.



while the General Staff and their corps headquarters got very good at reacting to Iranian assaults, quickly beginning the laborious effort of shifting heavy reserves and artillery from elsewhere along the front, Iraq's tactical leadership reacted frustratingly slowly. Iraqi junior officers showed little aggressive initiative in moving reserves to block or counterattack Iranian assaults and it invariably required the intervention of higher authority to get reserves underway. Even then, the reserves began their movement and executed their tasks extremely slowly. This tardiness frequently led to positions being overrun before help arrived and counterattacks coming long after a particular situation had been overtaken by events.<sup>184</sup>

Similarly, no matter how hard Iraqi training stressed the integration of the various combat arms, Iraqi tactical formations simply could not fight as combined arms teams. Corps and division commanders came to deploy their forces along defensive lines so that armor, artillery, infantry, anti-tank teams, and other supporting formations, *had* to support each other simply by having been sited in an integrated fire scheme. Similarly, they increasingly cross-attached various combat elements to form combined arms task-forces at lower and lower echelons in hopes that this would improve the combined arms coordination, but it rarely did. Especially in their counterattacks, when the maelstrom of combat effectively forced the devolution of authority to the tactical commanders on the spot, the task forces would disintegrate into their separate elements with tanks rolling off in one direction, infantry in another, and artillery firing in a third. Ultimately, the Iraqis simply compensated for these failings by concentrating greater and greater volumes of fire, including heavy use of CW, against the Iranians to break up their attacks.<sup>185</sup>

### *The War in the Air*

The contributions of the Iraqi Air Force had not improved much either. By about 1983 Iraq had won virtual air superiority by default. Spare parts shortages had crippled the IRIAF to the point where it could only generate about 5-15 sorties per day on a sustained basis, and though it could probably surge 70-90 sorties if necessary, doing so invariably hurt the IRIAF's ability to sustain a modest sortie rate thereafter. Nevertheless, Iraqi pilots still frequently aborted their missions when they received radar lock from Iranian fighters, and Iraqi jets continued to lose in air-to-air combat to the Iranians except when they had a significant numerical advantage. For the most part, the Iraqi Air Force still devoted relatively few assets to close support of ground operations, insisted on conducting these missions from high altitudes, and would not or could not decrease the long delays and difficult process involved for ground commanders to receive CAS. Indeed, during the first five or six years of the war, the army devoted increasingly more resources to helicopter acquisition as a substitute for fixed-wing CAS. Unfortunately, Iraq's helicopters were no more useful than the Air Force in providing such support. Iraqi helicopter gunship tactics consisted of flying out to a point several kilometers behind the Iraqi lines, pointing the helicopter toward the nearest Iranian positions, firing-off all of the munitions on the helicopter and then returning to base. Needless to say, Iraqi helicopters had little effect except when firing into massed concentrations of Iranian infantry as they moved forward for an assault.<sup>186</sup>

The Iraqi Air Force ultimately had a greater impact on the war through its attacks on Iranian strategic and economic targets, however, even in this area its achievements were modest and its performance mediocre. At various points during the war, Iraq

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<sup>184</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 153-156, 159-170, 178-183, 199-205, 206-218; Hiro, pp. 86-113; O'Ballance, *The Gulf War*, pp. 93-102, 114-120, 142-148, 160-167, 173-175.

<sup>185</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 153-156, 159-170, 178-183, 199-205, 206-218; Hiro, pp. 86-113; O'Ballance, *The Gulf War*, pp. 93-102, 114-120, 142-148, 160-167, 173-175.

<sup>186</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 100, 441, 465-494; *GWAPS, Volume 11, Part II: Effects and Effectiveness*, p. 127; Karsh, p. 39; Scales, p. 115; and author's interviews with General Bernard Trainor, June 1994.

attempted to use air and missile strikes against Iranian cities as a way of pressuring Iran into a compromise solution. Until 1988, however, Iraq was at a decided disadvantage. Although Iran had far fewer operational strike aircraft than Iraq, those it had could carry heavier bombloads and their pilots were somewhat better than their Iraqi counterparts. Moreover, Iraq suffered from the distinct disadvantage that Iraq's major cities were generally much closer to the Iranian border than were Iran's largest cities. For example, Baghdad is only 150 kilometers from the Iranian border, while Tehran is 600 kilometers from Iraq. For Iraq this meant that most of Iran's cities were beyond the range of its Scud missiles, and effectively beyond the range of Iraqi aircraft because the Iraqi Air Force shied away from such long-range missions and was terrified of Iranian air defenses. The Iranians were much more willing to undertake airstrikes and risk Iraqi air defenses, and later, when Iran purchased Scuds from North Korea and Libya, Baghdad and Iraq's other major cities were well within Iran's range. Thus until 1988 Iran could invariably do more damage to Iraqi cities than could Iraq to Iranian cities, and this imbalance sometimes forced Baghdad to scale-back or cease its attacks on Iranian cities in hope that the Iranians would follow suit--which they usually did.<sup>187</sup>

Iran and Iraq began attacking each other's oil facilities early in the war and the dimensions of this campaign gradually escalated over time as each side grew more desperate. Iraq had tremendous difficulty actually inflicting any substantial damage on Iran's oil industry. The Iraqis flew few reconnaissance missions before or after their airstrikes, and did a very poor job trying to objectively assess the affect of their attacks, preferring instead to simply claim that the target had been destroyed. Initially, Iraqi airstrikes were horribly inaccurate, in part because the Iraqis insisted on attacking only from high altitude. Later in the war, Iraq received the 64 Mirage F-1s it had bought from France, and sent its best pilots to France to learn to fly them. These planes, when equipped with AS-30L laser-guided bombs, proved very effective and by the latter half of the war Iraq had learned to employ them to take out important targets at key Iranian industrial and oil facilities. However, even with the Mirage F-1s, Iraqi airstrikes were always too small, never dispatching enough planes to really put Iran's facilities out of action. Thus, while Iraq was able to take a number of Iranian facilities off-line at different times, they never did enough damage so that Iran could not repair the facility and bring it back on-line in a matter of weeks or even days.<sup>188</sup>

Similarly, while Iraqi efforts to strike tankers in the Persian Gulf bound for Iran improved with the arrival of the Mirages, overall, their impact was slight. Initially, Iraqi efforts to attack Iranian tankers enjoyed only modest success because the only platform Baghdad used to attack ships at sea were Super Frelon helicopters with Exocet missiles. The Super Frelons had a very limited range and could only reach tankers in the northernmost reaches of the Gulf. (The Exocet also had a very small warhead that did little damage to most tankers.) At first, these attacks were useful to Iraq because they scared off foreign-flagged tankers from putting in to Iranian ports. However, the Iranians simply made it more attractive for the tanker captains, moved their export terminals farther south along their coast, and--since the Exocets could not actually sink the tankers--Iranian oil exports picked up again. In 1983, Iraq received five Super Etendard attack jets which had a longer range than the helicopters, but still could not reach all of the various ports and oil facilities along Iran's lengthy coastline. Moreover, the Iraqis did not do well identifying targets for their airstrikes, still relied on the Exocet, and with only five aircraft, they could do little damage anyway. The arrival of the Mirages helped matters to a certain extent. Not only did the Mirages have an even longer range, but they also were

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<sup>187</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 99, 157-159, 205-206, 229-231; O'Ballance, *The Gulf War*, pp. 42-45, 126-127, 153-154, 169-170, 181-182.

<sup>188</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 170-175, 191-199, 205-206, 208-213, 229-231, 235-237, 242-244, 271-274, 282-290, 310-313; O'Ballance, *The Gulf War*, pp. 55-56, 108-109, 122-125, 128-129, 154-156, 170-172, 182-185; Sluglett and Sluglett, p. 260.

capable of refueling each other in flight, thus allowing for considerably longer strike missions. The high-quality training the Mirage pilots had received from the French also paid off in better results. Nevertheless, the Iraqis still suffered from their insistence on using the Exocet missile rather than more powerful ordnance as well as their incapacity to properly identify targets ahead of time. On most missions, a Mirage would fly at medium altitude down the Gulf along the Saudi coastline, turn into the center of the Gulf, flip on its radar and fire at the largest ship it detected. Clearly this was no way to run an anti-shiping campaign and it produced very middling results--aside from the spectacular hit on the USS Stark. However, the most important problem with Iraq's air campaign against Iran's oil exports was that Baghdad never made a determined effort to sink large numbers of tankers exporting Iranian oil or to sustain this effort over a long period of time. Instead, Iraqi attacks were sporadic and random serving more as an annoyance than a real problem for Tehran.<sup>189</sup>

### **Reform and Victory, 1986-1988**

At the beginning of 1986 the Iran-Iraq war was mired in stalemate and Iraq believed that its fortifications and the tremendous investment in additional firepower had given it the key to stymieing Iran's offensive tactics. At that point, Baghdad sought only to minimize its losses in the ceaseless combat in southern Iraq and Kurdistan, and hoped that its pressure on Iran's oil economy would eventually force Tehran to recognize the stalemate on the ground. The Iranians, on the other hand, had slowly come to realize both that their manpower was not inexhaustible and that Iraqi firepower could be devastating, but had not concluded that their invasion attempts were in vain. Iran kept pounding away at Iraq's defenses, albeit with greater caution than in the past.

#### *The Battle of al-Faw*

What appeared to be an interminable deadlock ended abruptly on the night of 10/11 February 1986. In a rainstorm, Iranian forces crossed the Shatt al-Arab in force at its mouth and overran the al-Faw peninsula. The Iraqis had assumed that Iran lacked the amphibious equipment to cross the Shatt opposite al-Faw, one of the widest parts of the river. Consequently, the peninsula was held by Popular Army forces that broke and ran with the first Iranian attacks. The Iranians quickly poured troops into al-Faw and began pushing northward toward Umm Qasr and al-Basrah.<sup>190</sup>

In a panic, Baghdad began hurrying units south as fast as it could. Several hastily organized Iraqi counterattacks failed miserably against the Iranians. Although the al-Faw peninsula is extremely marshy in February, making the terrain unsuitable for mechanized forces, Iraq lacked well-trained infantry units and so had to rely mostly on heavy formations. Iraqi armor counterattacked with very little infantry support and the infantry that did participate fought extremely poorly and failed to support the armor, allowing the picked Iranian forces who had made the crossing to repulse these counterattacks with ease. In its desperation, Iraq committed its air force to the battle. The Iraqi aircraft had little impact on the Iranian forces, which were mostly infantry and therefore presented few high-value targets. The Iraqis also tried to attack the bridges Iran erected across the Shatt and even tried to interdict Iranian units moving down the roads in Khuzhestan toward al-Faw. However, between the rain, Iran's practice of moving mainly at night, and poor pilot skills, the Iraqis rarely did more than minor damage while losing 20-25 aircraft. When the initial counterattacks failed, Iraq rushed its best infantry south to al-Faw--special forces and Republican Guards--for another round of counterattacks, which

<sup>189</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 170-175, 191-199, 205-206, 208-213, 229-231, 235-237, 242-244, 271-274, 282-290, 310-313; O'Ballance, *The Gulf War*, pp. 55-56, 108-109, 122-125, 128-129, 154-156, 170-172, 182-185.

<sup>190</sup> Bigelow, pp. 15-16; Cordesman and Wagner, *The Iran-Iraq War*, pp. 219-221; Hiro, pp. 167-168; Pelletiere, p. 98; O'Ballance, *The Gulf War*, pp. 173-174.

succeeded in halting the Iranian advance, but could not push them back.<sup>191</sup>

On February 22, Iraq launched a major counterattack to try to expel the Iranians from al-Faw, mustering three division-strength columns, each commanded by one of Iraq's best corps commanders--Hisham Sabah Fakhri, Maher 'Abd al-Rashid, and Sa'adi Tuma 'Abbas al-Jabburi. The Iraqis literally threw everything they had at the Iranians. They committed the air force in full, flying as many as 200 CAS/BAI sorties per day, in addition to enormous quantities of artillery, and heavy doses of CW. However, after three weeks of constant attacks the Iraqis had made little progress. Iraqi infantry--even the elite units--continued to perform poorly and had to rely heavily on the firepower of their tanks and artillery. Iraqi armor generally had to stick to the roads because of the soft terrain, and even where the ground was firmer they refused to maneuver against the Iranians. Instead the tanks tried to just force their way south against the dug-in Iranian infantry who were well-armed with anti-tank weapons. Iraq was unable to suppress or defeat Iranian anti-tank teams either with artillery fire--slow to respond and inaccurate as ever--or with infantry, who simply did not understand how to cooperate with the tanks. In the end, the Iraqis suffered heavy losses, taking about 8,000 casualties, losing another 20-25 aircraft to Iranian F-14s and air defenses, and sustaining 30 percent casualties among the Republican Guards.<sup>192</sup>

#### *Building a New Model Army*

The invasion of al-Faw and the dramatic failure of Iraq's counterattacks jarred Baghdad out of its complacency. In particular it seems to have had two effects. First, it convinced Iraq's General Staff that its troops lacked the capabilities to conduct effective offensive operations. Second, it apparently convinced the political leadership that Iraq could not simply remain on the defensive and hope that at some point Iran would conclude that they could not crack Iraq's defenses and agree to a cease-fire. Baghdad's initial reaction to the loss of al-Faw was to take the lightly-defended town of Mehran in central Iran and then try to exchange Mehran for al-Faw, but the Iranians quickly took Mehran back. Baghdad then tried to step up its attacks on Iranian tankers and oil facilities, but this had no impact on Tehran, which was concentrating its efforts on preparations for a renewed assault on al-Basrah. Thus eventually, the General Staff was able to persuade Saddam that he could not find a clever, low-cost way to bring the war to a close: the only way to end the war was to actually defeat the Iranian army on the ground.<sup>193</sup>

Having won Saddam's consent to build an army capable of defeating the Iranians, the General Staff's first move was to create a force able to execute offensive operations. For this purpose, they secured Saddam's approval to dramatically expand the Republican Guard. At the beginning of the war, the Republican Guard consisted of two brigades that served as the garrison of Baghdad and Saddam's household troops. Because the Guard was intended to defend the regime against a potential army coup, they were given the best equipment and training Iraq could provide. The Guard was drawn overwhelmingly from Saddam's hometown of Tikrit and other nearby Sunni cities, such as Samarra, to help ensure its loyalty. Between the Guards' equipment, training, and high *esprit de corps* it was considered one of Iraq's elite forces, and throughout the war it was committed to

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<sup>191</sup> Bigelow, pp. 15-16; Cordesman and Wagner, *The Iran-Iraq War*, pp. 219-221; Hiro, pp. 167-168; Pelletiere, p. 98; O'Ballance, *The Gulf War*, pp. 173-174. It is worth noting that by the time of the Iraqi counterattacks, the Iranian assault had essentially run out of steam anyway, and so did not require much of an Iraqi counterattack to halt.

<sup>192</sup> Bigelow, pp. 16-17; Cordesman and Wagner, *The Iran-Iraq War*, pp. 222-224; Hiro, pp. 166-170; Richard Jupa and James Dingeman, "The Republican Guards: Loyal, Aggressive, Able," *Army*, March 1991, p. 58; Pelletiere, p. 99; O'Ballance, *The Gulf War*, pp. 173-179.

<sup>193</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 225-231; Hiro, pp. 171-176; O'Ballance, *The Gulf War*, pp. 176-186.

battle whenever the situation looked particularly bleak, such as at the First Battle of al-Basrah in 1982. Because it was increasingly called on to participate in combat operations the Guard gradually expanded to seven brigades by early 1986.<sup>194</sup>

By early 1987, the Republican Guard brigades had been expanded into the new Republican Guard Forces Command (RGFC), indicating that it was now a corps-formation, with 28 brigades under six division commands. Of greatest importance, the General Staff also won Saddam's consent to stress proficiency over loyalty in recruiting new members for the Guard. While RG units remained overwhelmingly Sunni, and still possessed a higher percentage of Tikritis than the rest of the Army, the new ranks were filled out largely by plucking the best soldiers and officers from regular Army units and making them Republican Guards. Many of these new Guard personnel were volunteers, but a large number were competent soldiers and officers who simply were assigned to the RGFC. Their loyalty was then secured by giving them lavish pay and benefits, as well as the prestige attached to being a member of Iraq's elite force. In addition, as Sunni Arabs the Republican Guards had an important tie to the regime, and would support it if only because Saddam was a bulwark against a possible shi'ah or Kurdish takeover. While these measures unquestionably did buy a considerable degree of loyalty from the new Republican Guards, Saddam's paranoia was not fully assuaged and so he created a new force, the Special Republican Guard, made up mostly of members of the original Republican Guard to handle the mission of garrisoning Baghdad and defending the regime.<sup>195</sup>

The General Staff then took the RGFC out of combat, along with a small number of the best regular Army divisions (basically the 3rd, 6th, and 10th Armored Divisions and the 1st and 5th Mechanized Infantry Divisions), and thoroughly retrained them. These units received extensive training in combined arms operations and offensive tactics. They practiced constantly and began conducting large, corps-level maneuvers fairly regularly. These units were lavishly provided with combat support and combat service support units, and had first call on supplies and equipment. The Guards also were provided with the best weaponry in the Iraqi arsenal, including Soviet T-72 tanks and BMP-1 infantry fighting vehicles, French GCT self-propelled howitzers, Austrian and South African GHN-45/G-5 artillery pieces, and Soviet SA-13 and SA-14 surface-to-air missile systems. Although by stripping the rest of the army of the best soldiers, officers, and equipment the General Staff deprived most Iraqi units of any combat power they previously possessed, it gave the General Staff a hard core of about 11 divisions and 150-200,000 men with a modest offensive capability.<sup>196</sup>

Along with its new offensive arm, the Iraqi General Staff developed a new approach to operations, basically extrapolating from the limited progress made earlier in the war. The most important element of this new approach was detailed scripting of military operations. The General Staff, led by its Deputy Chief of Staff for Operations, General Husayn Rashid Muhammad at-Tikriti, concluded that attempting to train Iraqi tactical formations to conduct combined arms operations, to employ tactical maneuver, to

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<sup>194</sup> Baram, "The Future of Ba'thist Iraq," p. 36; Cordesman and Wagner, *The Iran-Iraq War*, esp. pp. 236, 259, and 354; Jupa and Dingeman, pp. 54-60.

<sup>195</sup> Jupa and Dingeman, pp. 54, 60-62; NTC, pp. 25-26; Scales, pp. 113-114. It is interesting to note that the events of 1991 seem to have largely borne out this assessment of the loyalty of the expanded Republican Guard. After the Gulf War, the RGFC remained loyal to the regime in putting down the shi'ah and Kurdish revolts, in large part because this was a threat to sunni control of Iraq. However, after the rebellions had been crushed there were reports of coup plots having been discovered in the RGFC--and eradicated by units of the Presidential Guard. Thus while the Guards do on average appear to evince greater loyalty to the regime than the regular Army, this loyalty is no longer so steadfast as was the case before the expansion of 1986.

<sup>196</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 355; Freedman and Karsh, p. 288; Jupa and Dingeman, pp. 54-62; NTC, pp. 25-26; Scales, pp. 113-114.

act creatively, and to aggressively seize battlefield opportunities had consistently failed. Instead, they decided that, just as Iraqi operations improved when senior field officers began micromanaging operations, so the General Staff would begin extensively scripting major offensive operations. Husayn Rashid gathered a group of Iraq's most talented staff officers and began planning both counterattack and offensive operations in minute detail. Since they could not count on their field commanders to properly coordinate combined arms operations, the General Staff would do it for them by writing it into the script. Since they could not count on their field commanders to employ tactical maneuver, the General Staff would write maneuvers into the script as well. Since they could not count on their field commanders to innovate in battle, they wrote innovative approaches into the script of the operation. In short, they tried to overcome all of the failings of Iraqi tactical formations by writing operations orders so detailed that simply by following this guidance Iraqi field commanders would do everything they needed to fight well.<sup>197</sup>

These detailed plans were then given to the Republican Guards and the handful of competent regular Army divisions to learn backwards and forwards. For months beforehand, the RGFC and regular Army units would practice executing these operations. The Iraqis built vast, full-size mock-ups of the terrain over which they rehearsed these operations. The units designated to take part in these offensives would rehearse their missions repeatedly. Units were trained to perform specific tasks and nothing else, and these specific tasks they repeated again and again. Initially, units would practice their missions on their own. Then later, they would be integrated into larger exercises in which they could practice their tasks in conjunction with supporting forces and adjacent units, until eventually the entire operation could be practiced as a whole. Eventually, they reached the point where the entire operation could be performed from memory.<sup>198</sup>

#### *The Second Battle of al-Basrah, 1987*

In early January 1987, Iran tried to follow up its success at al-Faw with a major assault against al-Basrah, the largest and most dangerous offensive against the city since 1982. The Iraqis were fixated on the Iranian positions on al-Faw, primarily because it was the only point where Iranian forces were already across the Shatt, and feared that Iran would use this bridgehead to launch an offensive to encircle al-Basrah from the southeast. The Iranians played on this fear by launching a diversionary assault across the Shatt just north of the al-Faw position--as if to turn the flank of the Iraqi defensive lines facing the Iranian bridgehead. Iraqi intelligence again failed miserably, and when the real assault came to the east and northeast of al-Basrah, the Iraqis were completely surprised. Tehran had concentrated enormous force for the operation, probably between 150,000 and 200,000 men, and more importantly, had brought in its most experienced Revolutionary Guard and regular Army divisions for the attack. The Iranians attacked both north and south of Fish Lake and, between the benefits of surprise and the number and quality of forces they had mustered, they quickly overran the first two Iraqi defense lines ringing al-Basrah. However, at this point the attack ground to a halt because of Iran's chronic shortage of mobility assets, and the difficulty of sustaining offensive operations reliant on human-wave attacks against rank after rank of Iraqi fortifications.<sup>199</sup>

Both sides raced to pour reinforcements into the area. Baghdad in particular began committing more and more of its best units, including large numbers of Republican

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<sup>197</sup> Bigelow, p. 16; Major James Blackwell, *Thunder in the Desert*, (NY: Bantam, 1991), pp. 56-57; Danis, p. 12; *GWAPS, Volume II, Part I, Operations*, pp. 64-70; Pelletiere, p. 147; and author's interviews with General Bernard Trainor, June 1994.

<sup>198</sup> Bigelow, p. 16; Danis, p. 12; Cordesman and Wagner, *The Iran-Iraq War*, pp. 355, 388; *GWAPS, Volume II, Part I, Operations*, pp. 64-70; NTC, p. 42; Pelletiere, p. 147; and author's interviews with General Bernard Trainor.

<sup>199</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 247-250; Hiro, pp. 180-181; O'Ballance, *The Gulf War*, pp. 194-195; Pelletiere, *The Iran-Iraq War*, pp. 119-122.

## Iranian Offensives, 1986-1987



- - - - - Iranian al-Faw Offensive, 1986
- ..... Iranian attacks, 1987
- Defenses of al-Basrah
- Iraqi counterattacks, 1986-1987



Guard formations, to the defense of al-Basrah. Iraq used enormous amounts of artillery and chemical weapons against the massed Iranian formations. Iraq even unleashed its air force against the Iranians, conducting as many as 500 sorties on some days, in an all-out effort to halt the Iranians. At the end of January, Iraq launched a large-scale counterattack relying on local reserves to try to drive in the flank of the southern Iranian penetration. The plan was to drive south from the west bank of Fish Lake, catch the Iranian formations in their right flank, and sever the Iranian penetration at its shoulder. However, the counterattack went nowhere. Although the counterattack force began as a combined arms team, it almost immediately separated into its different components with the infantry veering off to the southwest and the armor veering off to the southeast and the artillery failing to effectively support either. Moreover, at an operational level the counterattack took the Iranians in the flank, but the attack moved so slowly that Iran was able to shift forces to meet them. At the tactical level, Iraqi forces simply charged straight at the Iranians, launching frontal assaults against dug-in Iranian infantry.<sup>200</sup>

For the next month, the Iranians kept up the pressure on al-Basrah, feeding in more and more units to launch one human-wave assault after another. Through sheer determination, they continued to inch forward. A major problem for the Iraqis was that under the relentless Iranian pressure, a number of infantry formations had disintegrated, allowing the Iranians to penetrate to the next line. Iraq's air effort made little impression on the Iranians--and resulted in the loss of about 50 Iraqi aircraft, mostly to Iranian tactical air defenses. By late February, however, Iraq had deployed sufficient numbers of Republican Guard and other elite formations to the defensive lines to put up a stout defense along the entire front. Meanwhile, the Iranians had lost so many men to Iraqi firepower and earthworks in its human wave attacks (probably on the order of 70-80,000 casualties) that the offensive ground to a halt--but not before piercing five of the six Iraqi defensive rings and penetrating to within 10 kilometers of al-Basrah.<sup>201</sup>

At the beginning of March, Iraq tried another counterattack against the Iranian penetration, again attacking from the Fish lake area to try to cut the Iranian salient in half. Again, the Iraqis were hindered by a major breakdown in combined arms cooperation and the constant tendency of Iraqi armor to conduct frontal assaults rather than maneuvering for advantage. In addition, while Baghdad committed heavy air support to the counterattack, the Iraqi Air Force added little to the effort because its airstrikes were not provided in a timely fashion, nor were they delivered in sufficient strength to have a substantial impact, nor were Iraqi pilots capable of accurately targeting tactical military targets. Once again the counterattack quickly sputtered to a halt with little to show.<sup>202</sup>

Ultimately, the Iranians were defeated by the skill of Iraq's General Staff which had concentrated enormous force--including much of the revamped Republican Guard--to hold the lines and directed massive firepower against the endless waves of Iranians, as well as by their own shortcomings in mobility and sustainment. Iraqi units had generally done fine when sitting behind their impressive fortifications and blasting away at the Iranians, but had once again demonstrated that they were ill-suited for operations other than static defense. In the close combat, some Iraqi units had broken but many others, especially the Guard units, had stayed and fought tenaciously.

### **Iraq Goes on the Offensive, 1988**

When the 1987 offensive against al-Basrah failed Iran finally recognized that its chances of bringing the war to a successful conclusion through a decisive military blow had all but evaporated. Tehran began to talk increasingly of attrition strategies and

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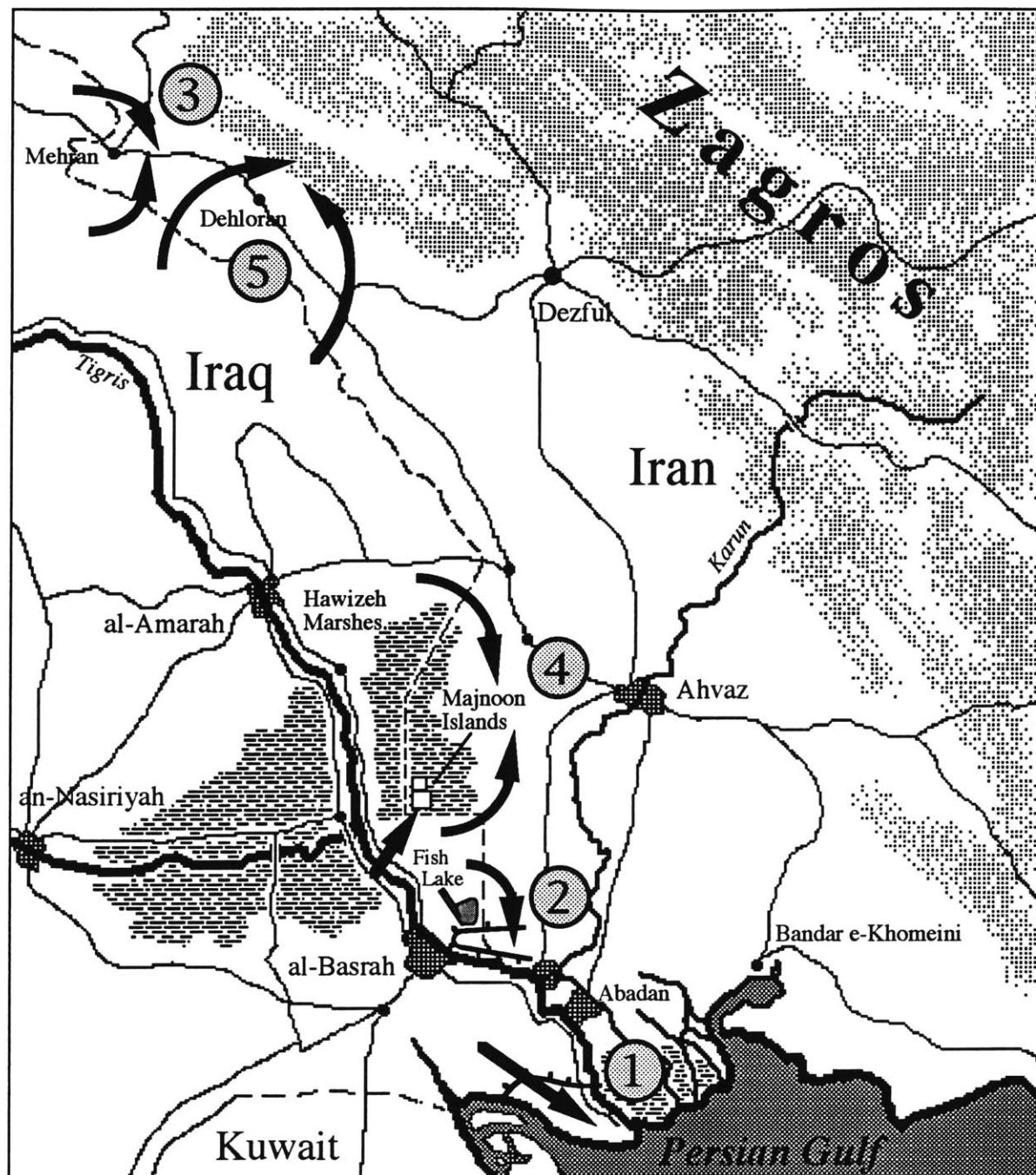
<sup>200</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 250; Hiro, p. 181; O'Ballance, *The Gulf War*, p. 195.

<sup>201</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 250-254; Hiro, pp. 181-184; O'Ballance, *The Gulf War*, pp. 195-196; Pelletiere, *The Iran-Iraq War*, pp. 119-122.

<sup>202</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 254; Hiro, p. 183.



## Iraqi Offensives, 1988



### Iraqi Offensives:

1. al-Faw, April 17
2. Fish Lake, 25 May
3. Mehran, June 18
4. Majnoon Islands, 25 June
5. Dehloran, 12 July

← - Iraqi attacks 1988

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triumphing by stirring revolution in Iraq. While Iraq was relieved by its successful defense of al-Basrah, it was committed to bringing the war to a more rapid close by defeating the Iranians on the battlefield. Beginning in April 1988, the Iraqis conducted a series of five major offensives led by the new Republican Guard and employing the new approach developed by the General Staff after the Iranian invasion of al-Faw.<sup>203</sup>

The first offensive kicked off on April 17 at al-Faw. The Iraqis conducted an extremely effective deception campaign and exercised very tight operational security beforehand. As a result, the sudden Iraqi offensive--the first major attack they had conducted since 1980--caught the Iranians completely off-guard. The General Staff concentrated 100,000 men of the Republican Guard and the Iraqi VII Corps against the 15,000 second-rate Iranian troops manning the positions on al-Faw. The Iranians had little artillery support and even less armor, while the Iraqis were plentifully disposed of both. In addition, the attack received over 300 sorties of air support from the Iraqi Air Force. Iraq began the attack with an enormous artillery bombardment that included a heavy CW component and simply overwhelmed the Iranian defenders. The Republican Guards pushed down the southern coast of the peninsula while the VII Corps pushed down the northern coast. The attack went off almost without a hitch and in 35 hours the Iraqis had secured the peninsula and captured much of Iran's equipment intact.<sup>204</sup>

By 25 May, the Iraqis had regrouped and were ready for another offensive. This time they attacked the Iranian salient south of Fish lake created during the second Battle of al-Basrah. The Iraqis convinced the Iranians that the attack was going to take place farther north and so caught the Iranians with their reserves out of place and their units around al-Basrah unprepared. Once again, the Iraqis employed two corps to conduct the attack--the Republican Guards and the III Corps. Iraq's assaulting formations probably outnumbered the Iranian defenders by five or six-to-one in manpower and as much as fifteen or twenty-to-one in tanks and APCs. The artillery attack that preceded this assault was even more massive than that employed at al-Faw, and the Iraqis again liberally used mustard gas and nerve agents on Iranian units throughout the battle. The Iraqis employed hordes of armor well-supported by mechanized infantry in a series of flanking maneuvers to penetrate and roll-up the very extensive Iranian fortifications in the area. An Iranian counterattack temporarily snarled the Iraqi operations but it was quickly dispersed by sheer firepower and the attack continued. Although initially the Iranians fought hard, after their counterattack failed, many units fled, leaving their weapons behind. This operation took only twelve hours to complete. Iraq reduced the Iranian salient and captured about 150 artillery pieces and 100 of Iran's precious supply of operable tanks.<sup>205</sup>

The next attack was a somewhat smaller affair against the Iranian city of Mehran in the central sector of the front. The Iraqis deployed several divisions of their own troops along with a force from the Mujahideen e-Khalq, an Iranian dissident group that Iraq had trained and equipped as an alternative to Khomeini's regime. Again the Iraqis laid on a huge artillery barrage that included vast quantities of chemical weapons. They followed this with a massed armor assault that quickly overwhelmed the Revolutionary Guard units defending the town and secured the heights to the east. Again the Iranians were shattered by the artillery and, especially, the CW and then were swept aside by the Iraqi armor. Cordesman and Wagner estimate that the Iranians lost the equipment of at least two Revolutionary Guard divisions in the attack.<sup>206</sup>

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<sup>203</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 254-261.

<sup>204</sup> Bigelow, pp. 15-17; Cordesman and Wagner, *The Iran-Iraq War*, pp. 373-375; Hiro, p. 203; Pelletiere, *The Iran-Iraq War*, pp. 141-142.

<sup>205</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 381-383; Hiro, pp. 206-207; Pelletiere, *The Iran-Iraq War*, pp. 142-144.

<sup>206</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 387-388; Hiro, p. 209.

A week later, Iraq launched the Tawakalnah alla Allah offensive against the Majnun islands. The Majnun islands were two small, man-made patches of relatively solid ground in the midst of the Hawizah marshes built to help exploit the Majnun oil fields. Iran had taken the islands in 1984 and had held them against several Iraqi counterattacks. On 25 June 1988, Iraq executed its most ambitious offensive to date. Iraq concentrated over 600 artillery pieces for the attack which led off the offensive with the usual enormous artillery-plus-CW barrage. Then specially-trained Republican Guard special forces units conducted an amphibious assault against the islands. Once these units had gained control of the islands, engineers quickly constructed pontoon bridges and earthen causeways which the Iraqis used to move tanks onto the islands to defend them against a possible Iranian counterattack. Having secured the islands, the Iraqis launched a double envelopment of the Iranian positions in the Majnun and southern Hawizah marshes. Republican Guard armored divisions swung around to the north and linked up with mechanized formations from the III Corps that had looped around to the south thirty kilometers into Iran. The Iranian forces in the area disposed of 50-60 tanks while the Iraqis threw at least 2,000 tanks into their two pincers and the Iranians were simply obliterated. The Iraqis mauled six to eight Iranian Army and Revolutionary Guard divisions in their envelopment, seizing all of their weapons before pulling back across the border.<sup>207</sup>

The final Iraqi offensive was conducted near the Iranian city of Dehloran on 12 July. As had become the norm, Iraq began the attack with an artillery bombardment mixed with large quantities of CW. For this attack, Iraq relied on the Republican Guard in conjunction with mechanized elements of the IV Corps operating along a 130-km long front. Again the Iraqis conducted a double envelopment with the Guard forming one prong and the IV Corps forming the other. By this point, the Iranian ground forces were thoroughly demoralized by the string of ever-greater and ever-easier Iraqi victories. They also were terrified of the Iraqi artillery/CW barrages. Consequently, the Iraqis met little resistance and drove forty kilometers into Iran, encircling and routing a number of Iranian formations. The Iraqis then retired back across the border with the equipment and prisoners they had captured.<sup>208</sup>

These five offensives effectively destroyed Iran's remaining ground power, leaving the country defenseless, and forcing Tehran to accept a cease-fire.<sup>209</sup> All told, the Iraqis captured about 600 tanks, 400 other armored vehicles, and 400 artillery pieces in these battles. The remaining Iranian units in the Khuzhestan area were broken, demoralized, and down to less than 200 operable tanks to oppose the thousands Iraq could muster for a single operation.<sup>210</sup> The Iraqis could have driven into Khuzhestan as easily as they had in 1980, but this time, their military operations were decisive and efficient and the Iranians had no interest in gambling on Iraqi intentions. On 8 August both sides announced an immediate end to the fighting.

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<sup>207</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 388-390; Danis, p. 11; Hiro, pp. 209-210; Pelletiere, *The Iran-Iraq War*, p. 144.

<sup>208</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 395; Pelletiere, *The Iran-Iraq War*, p. 144.

<sup>209</sup> While the destruction of Iran's ground power was the principal reason for Iran's surrender, there were other factors as well. Two of the most important were the aggressive US naval and air actions in the Persian Gulf, which convinced the Iranians that Iraq had the full support of--if not an outright alliance with--the United States, and the development of the al-Husayn modified-Scud missile which gave Iraq a ballistic missile with which they could strike Tehran and other distant Iranian cities. Shortly before the 1988 offensives, Iraq had unleashed a barrage of almost 300 al-Husayns against Iran which, coupled with Iranian fears that the Iraqis would arm them with CW warheads, panicked the civilian population causing as many as one million people to flee Tehran. See, Cordesman and Wagner, *The Iran-Iraq War*, pp. 363-368, 372-373, 375-381, 390-394; and Hiro, pp. 189-191, 200, 203-205, 211.

<sup>210</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 389

The 1988 offensives demonstrated a higher degree of military effectiveness than Baghdad's forces had even hinted at previously. Iraqi forces penetrated Iranian defensive positions quickly and usually with a minimum of casualties. Once through the front lines, Iraqi armored columns operating in conjunction with mechanized infantry and combat engineers, and provided with plentiful artillery and air support, conducted fairly deep maneuvers that led to the encirclement of large Iranian forces. The offensives were preceded by highly effective deception operations and benefited from excellent intelligence regarding the disposition of Iranian forces at the start of the battle.<sup>211</sup> What's more, all of the Iraqi operations moved crisply and efficiently, proceeding from one phase to the next with little delay and featuring relatively rapid movement throughout.

It is not the case, however, that the Iraqi victories in 1988 reflected an across the board improvement in Iraqi military effectiveness. The five offensives were testimony to the tremendous improvement in Iraq's strategic-level military leadership since the beginning of the war. In particular, the critical element in each of Iraq's victories was the detailed planning by the General Staff. The General Staff was able to rely on its strategic intelligence assets (primarily photo-reconnaissance aircraft and information provided by the United States) to put together an accurate picture of Iranian deployments.<sup>212</sup> They then used this information to develop a highly detailed plan to rip apart Iran's front-line defenses, encircle large formations, and defeat its operational reserves. They carefully concentrated enormous force against a given sector and successfully convinced the Iranians that each attack would come somewhere else so that the Iranians were surprised and unprepared, and at a severe disadvantage in terms of available forces. Moreover, the General Staff wrote into these plans combined arms coordination, airstrikes and artillery fire missions, operational-level maneuver, and the timing and distance of each part of the larger plan. Finally, the General Staff was careful to undertake only very limited, short-duration attacks which could be planned in detail in advance because the limited scope of the operations would keep unforeseen events to a minimum. In short, the planning and preparation for each operation were first-class.

The execution of these operations, however, did not live up to the standards set by their planning. At a tactical level, the Iraqis exhibited the same problems that had plagued them throughout the war. While the Republican Guards and the best regular Army units performed noticeably better than the rest of the armed forces, their improvement can only be said to have been relative. In particular, the same old problems could be seen when, for one reason or another, the situation did not develop as anticipated by the General Staff plan. Whereas combined arms integration was stilted but adequate for most of the Iraqi moves, on many occasions when Iraqi tactical units were caught off-guard by an Iranian ambush or an unexpected defensive position, this cooperation disintegrated immediately, leading to infantry casualties and tank losses. Unforeseen Iranian counterattacks continued to have a disproportionate impact on Iraqi forces; the Iraqis were usually surprised, and slow to react, and in every case their only response was to try to defeat the counterattack by overwhelming firepower. Fortunately for them, their advantage in this area was so enormous (and the Iranian forces so weak) that this solution generally worked. Overall, Iraqi tanks continued to rely on massed firepower and the shock effect of frontal assaults rather than maneuver. Although the initial phases of an attack often featured tactical maneuver by tanks and APCs, once the armor broke free and was exploiting, such maneuver became increasingly rare. In those few instances when the Iraqis faced Iranian mobile reserves, the Iraqis consistently reverted to their previous practice of charging the Iranians with their guns blazing, and tended to defeat the Iranians through sheer weight of numbers rather than any skill in handling a tank. Similarly, Iraqi

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<sup>211</sup> Bigelow, p. 16; Cordesman and Wagner, *The Iran-Iraq War*, pp. 373-374, 381-382.

<sup>212</sup> Bigelow, p. 16; Cordesman and Wagner, *The Iran-Iraq War*, p. 414; Freedman and Karsh, p. 25; Gordon and Trainor, p. 38; *GWAPS, Volume II, Part I: Operations*, p. 64; O'Ballance, *The Gulf War*, p. 198; Pelletiere, p. 96.

artillery fire was devastating primarily because of its volume and the heavy reliance on CW. Iraqi artillery batteries only fired pre-registered, pre-planned fire missions--even in support of the exploitation operations--and as a result, Iraqi artillery rarely could contribute if the armored columns took a wrong turn or encountered Iranian resistance where it was not expected. Indeed, Iraqi artillery generally contributed little after the initial breakthrough battle.<sup>213</sup>

Clearly, these various problems indicate that whatever tactical success Iraq enjoyed was primarily a function of the detailed and well-conceived planning plus the extensive rehearsal on the part of the Republican Guard and other participating units. The Iraqis built life-size mock-ups of the terrain over which each of these operations was conducted and they practiced their tasks until they could be performed flawlessly, but they did not internalize any of the concepts that lay behind these carefully orchestrated moves.<sup>214</sup> Thus, when the plan went awry and local commanders were left to their own devices, the offensives began to fray. Whenever it fell to the tactical commanders to conduct an operation--such as when Iraqi forces encountered unexpected Iranian ambushes or counterattacks--they demonstrated that they did not understand combined arms cooperation or maneuver, could not respond quickly, and were largely incapable of independent initiative or improvisation. Their responses were slow, predictable and costly. However, by keeping most of the operations to only one or two days, Baghdad minimized the extent to which events could develop in an unexpected manner, and maximized the extent to which operations could be planned in detail and learned by heart ahead of time.

Overall, Iraq's achievements in 1988 were actually quite modest given the enormous imbalances between it and Iran. By 1988, the Iraqi military outnumbered Iran in every category of military manpower and hardware: Iraq boasted nearly 1,000,000 men under arms while Iran could field only about 600,000; Iraq had over 4,000 functional tanks while Iran had around 1,000; Iraq had over 600 combat aircraft while Iran could surge less than 50.<sup>215</sup> At the point of attack, Iraqi advantages were even greater with ratios of 10:1, 20:1 and even 50:1 in certain categories not uncommon.<sup>216</sup> On top of this, Iraq relied on massive doses of CW to overwhelm the Iranian defenders. Given these incredible disparities, what is surprising is that the Iraqis could not do more. In particular, the Iraqis never pushed more than 40 kilometers beyond the front lines, and never operated for longer than 36 hours--about as far and as long as the General Staff felt they could go without reality diverging so far from the plan that the entire operation unraveled.

### **Additional Observations on Iraqi Military Performance During the Iran-Iraq War**

There are several additional areas of Iraqi military effectiveness during the Iran-Iraq war that bear discussion. First is the issue of Iraqi air force performance. Iraqi pilots were extremely mediocre by Western standards. The French washed out 80 percent of all Iraqi pilots sent to France for training on the Mirage F-1. Likewise, the Soviets estimated that less than half of the Iraqi pilots they trained would have been accepted for duty in

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<sup>213</sup> Antal, pp. 64-72; Maj. General Edward B. Atkeson, "Iraq's Arsenal: Tool for Ambition," *Army*, March 1991, pp. 24-25; Bellamy, pp. 7-13; Bigelow, pp. 15-17; Cordesman and Wagner, *The Iran-Iraq War*, pp. 373-375, 381-383, 387-390, 395, 419-439; Danis, p. 11-12; Hiro, pp. 203, 206-207, 209-210; Jupa and Dingeman, pp. 54-62; Pelletiere, *The Iran-Iraq War*, pp. 141-144; and author's interviews with General Bernard E. Trainor, June 1994.

<sup>214</sup> Bellamy, pp. 7-13; Bigelow, p. 16; Blackwell, *Thunder in the Desert*, pp. 56-57; Cordesman and Wagner, *The Iran-Iraq War*, pp. 355, 388; Danis, p. 12; Friedman, p. 27; *GWAPS, Volume II, Part I: Operations*, pp. 64; NTC, pp. 41-42; Pelletiere, *The Iran-Iraq War*, p. 147.

<sup>215</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 359-360, 363, 389; Hiro, p. 195.

<sup>216</sup> Antal, p. 68; Bigelow, p. 16; Cordesman and Wagner, *The Iran-Iraq War*, pp. 388-389; Pelletiere, *The Iran-Iraq War*, p. 121.

Soviet line fighter regiments.<sup>217</sup> Iraq recognized that only about one quarter of all its combat pilots were actually qualified to perform combat operations (most were in the Mirage squadrons) and relied heavily on them for virtually all of their air operations.<sup>218</sup>

Throughout the war, Iraqi fighters were consistently defeated by the Iranians. While neither side scored many kills, most of the kills went to the Iranians, and a principal reason that so few kills were scored was that the Iraqis generally avoided engaging Iranian fighters for fear of being shot down. Only toward the end of the war when Iraq staged a number of aerial ambushes employing their elite Mirage F-1s to secure advantages of 3:1 or 4:1 were the Iraqis able to consistently prevail in air-to-air combat.<sup>219</sup> Iraqi pilots rarely displayed any aggressiveness, imagination, improvisation, or flexibility in dogfights despite their Western air-to-air combat doctrine which stressed such skills.<sup>220</sup> Moreover, they were heavily reliant on a Soviet-style ground-controlled intercept (GCI) system whereby most Iraqi air-to-air engagements were directed from the ground.<sup>221</sup> Indeed, the Iraqis were considered rigid even by Soviet standards.<sup>222</sup>

Iraq's air-to-ground (and air-to-sea) operations were better, but not dramatically so. At a very tactical level, the Iraqis eventually learned to do quite well in attacks against Iranian tankers and economic facilities--primarily oil installations. By the same token, Iraqi aircraft conducting CAS, BAI, deep interdiction, and strategic bombing missions fared extremely poorly with little change throughout the war. In these missions, Iraqi pilots were unwilling to press their attacks home, insisted on delivering their payloads from high or medium altitudes, and had terrible aim. This split appears to be entirely the result of the difference between the Mirage squadrons--with their high performance aircraft, precision-guided munitions, and better pilots with French training--and the rest of the Air Force. Even with the Mirages, Iraq mostly squandered this handful of capable assets.

In contrast to the improvement in their planning and direction of ground operations, the Iraqis never got much better when it came to air operations. They constantly failed to perform prestrike reconnaissance, air missions were planned rigidly and unrealistically, ordnance frequently was inappropriate to the target being struck, training in air-to-ground operations was poor and practice infrequent. Likewise, Iraq never learned to conduct post-strike reconnaissance to accurately assess damage, nor did it ever commit sufficient sorties to a target to either destroy it or suppress it for a sustained period of time. Instead, Iraqi airstrikes were small and sporadic and their inability to conduct a sustained campaign against any particular target set minimized the impact of even the well-executed attacks by their Mirage pilots.<sup>223</sup>

The difficulties of the Iraqi Air Force point to the larger problem Iraq had in effectively handling any of the modern weaponry it received during the war. In every instance, the Iraqis failed to take full advantage of the weapons they employed, and in most cases, never even approached the full capabilities of a piece of equipment. Iraqi personnel took inordinately long to learn to use a new weapons system, for example, four

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<sup>217</sup> GWAPS, *Volume II, Part I: Operations*, p. 77.

<sup>218</sup> Hiro, p. 184.

<sup>219</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 465, 477-479; GWAPS, *Volume II, Part II: Effects and Effectiveness*, p. 127; O'Ballance, *The Gulf War*, p. 43.

<sup>220</sup> Belzyudnyy, pp. 62-63.

<sup>221</sup> Gordon and Trainor, p. 104; GWAPS, *Volume II, Part I: Operations*, pp. 75-76.

<sup>222</sup> Belzyudnyy, pp. 62-63.

<sup>223</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 474, 479-492; Karsh, p. 39; R. A. Mason, "The Air War in the Gulf," *Survival*, Vol. 33, No. 3, May/June 1991, p. 212; O'Ballance, *The Gulf War*, p. 43; Scales, p. 115; Sluglett and Sluglett, p. 260; Staudenmaier, "Iran-Iraq," p. 225; and author's interviews with General Bernard Trainor.

years after their initial delivery, none of Iraq's Su-24 attack aircraft were operational.<sup>224</sup> By 1983, Edgar O'Ballance estimates that of the approximately 200 aircraft Iraq had lost, most were the result of accidents and maintenance problems.<sup>225</sup> Iraqi forces were rarely able to employ the more sophisticated aspects of many of the weapons in their inventory. More often than not, Iraq employed highly sophisticated weapons systems in highly unsophisticated manners because they were incapable of taking advantage of the capabilities of the equipment. For example, Iraqi tank crews rarely ever used the night vision equipment or lead computing sights on their later model Soviet tanks because they did not understand them.<sup>226</sup> Similarly, because Iraqi anti-aircraft gunners could not employ the Gun Dish radars on their ZSU-23-4s they instead employed a barrage fire system, thereby relieving them of the need to track enemy aircraft.<sup>227</sup>

Iraq's maintenance and repair practices were poor throughout the war. Iraqi combat units paid little attention to day-to-day maintenance, which generally had to be performed by a small group of technicians assigned to every unit of battalion strength and greater. More serious maintenance and virtually all repair work could only be performed at a small number of large depots concentrated around Baghdad and al-Basrah. Moreover, many of the technicians employed in these depots were foreigners, mainly Russians and other Soviet bloc nationals familiar with Soviet weaponry. Repairs that would routinely be taken care of by vehicle crews in the US or Israeli armies had to be performed at battalion or division level, while repairs that would routinely be taken care of at battalion level in Western armies had to be performed at depot level.<sup>228</sup> General Bernard Trainor reports that in most Iraqi armored and mechanized units, a 50 percent operational readiness rate was considered good.<sup>229</sup> Iraqi crews frequently abandoned tanks, APCs and other heavy equipment on the battlefield because they required minor repairs, and recovery of damaged vehicles could only be performed by corps-level and higher assets.<sup>230</sup>

Finally, Iraq got very little technical support for its military despite the focus of national assets on the war effort. Iraq had a small number of very competent technical personnel and these it assigned to a few high priority projects such as ballistic missile modification, chemical and biological warfare, and nuclear weapons. In these areas, the Iraqis enjoyed some considerable success. The al-Husayn was inelegant, and perhaps not a terribly impressive technical feat, but it got the job done and solved an important problem for Baghdad. Similarly, developing most chemical warfare agents is not difficult, but nonetheless the Iraqis did it fairly quickly and efficiently. Beyond these narrow and unspectacular successes, however, Iraq had little to show for its efforts. The Iraqi arms industry was never able to supply the armed forces with much more than ammunition and some small arms. Although Iraq claimed to have made numerous modifications to existing weapons systems and even developed some of its own, these were nearly all shams. Virtually all of the weapons Iraq claimed to have developed were either foreign weapons systems that Iraq had poorly-disguised and called something else--for instance, Iraq repainted an Italian drone and called it a new cruise missile and repainted a Soviet SA-2 and claimed it was a surface-to-surface missile--or else remained ideas on paper (and often bad ones at that) rather than actual systems. The modifications Iraq made to many existing weapons systems largely proved to be either minor--such as adding mine ploughs and rollers to Soviet tanks--or disabling, such as mounting the 125

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<sup>224</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 52, 465; Mason, p. 213.

<sup>225</sup> O'Ballance, *The Gulf War*, p. 122.

<sup>226</sup> McLaurin, p. 29; Staudenmaier, "A Strategic Analysis . . .", p. 17.

<sup>227</sup> O'Ballance, *The Gulf War*, p. 44.

<sup>228</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 440; O'Ballance, *The Gulf War*, p. 122.

<sup>229</sup> Author's interviews with General Bernard Trainor, June 1994.

<sup>230</sup> Helen Chapin Metz, *Iraq: A Country Study*, (Washington, DC: Library of Congress, 1990), p. 235.



mm smoothbore cannon of the T-72 in the turret of the T-55 which made it impossible to fire the gun without the recoil punching the breech through the back of the turret. Moreover, few of these modified weapons ever made it into combat in any significant numbers.<sup>231</sup>

### **The Gulf War, 1990-1991**

The Gulf War demonstrated just how modest Iraq's improvements in military effectiveness really were. At the time of the Gulf War, Baghdad's military remained largely depoliticized because Saddam had not felt a need to reimpose draconian commissariat controls after the end of the Iran-Iraq War. Baghdad retained most of the competent generals who had led its armies to victory over Iran, and in many cases promoted them to positions of greater responsibility. Training continued to stress conventional military operations against conventional threats and merit continued to be at least as important as loyalty, if not more so, for promotions. Nevertheless, the Iraqis were humiliated by the US-led multinational coalition during the Gulf War. In part, this change in fortunes can be attributed to the huge advantages the Coalition enjoyed in numbers, technology, and air power. However, it is equally the case that this humiliating defeat reflected just how little Iraqi tactical effectiveness had improved since the early 1980s. Without the advantages in numbers and firepower they had enjoyed over the Iranians, without the advantage of chemical warfare, and without the ability to conduct operations in the manner they needed to, Iraq's combat formations were helpless.

#### **The Invasion of Kuwait**

A bit more than two years after the end of the seemingly interminable war with Iran, Iraq was at war again. At 0100 hours on 2 August 1990, Iraq invaded Kuwait and set in motion a train of events that would lead to the destruction of most of its military at the hands of a multinational coalition led by the United States.<sup>232</sup>

The invasion of Kuwait was conducted by the entire Republican Guard, expanded to 8 divisions by the formation of a mechanized division and another infantry division shortly after the end of the Iran-Iraq war.<sup>233</sup> The Hammurabi Armored Division pushed down the main al-Basrah/al-Jahra highway, brushing aside Kuwaiti resistance at the Matlah pass.<sup>234</sup> Behind the Hammurabi followed the Tawakalnah alla Allah Mechanized Division.<sup>235</sup> Off to the west, the Madinah Munawrah Armored Division punched into northeast Kuwait and swung around the Matlah ridge, a maneuver that would have flanked the Kuwaiti army if it had actually deployed to fight as it had planned.<sup>236</sup> Meanwhile, two brigades of the Guard's Special Forces Division conducted a heliborne assault on Kuwait International Airport and then moved quickly to secure the Emir's

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<sup>231</sup> Cordesman and Wagner, *The Iran-Iraq War*, p. 440; Friedman, p. 110.

<sup>232</sup> Blackwell, *Thunder in the Desert*, p. 69; US Department of Defense (DOD), *Conduct of the Persian Gulf War*, (Washington, DC: GPO, 1992), p.3.

<sup>233</sup> Blackwell, *Thunder in the Desert*, p. 72; Scales, p. 45; US DoD, *Conduct of the Persian Gulf War*, pp. 3-7.

<sup>234</sup> Blackwell, *Thunder in the Desert*, pp. 69-71; Freedman and Karsh, p. 67; Scales, p. 45; US DoD, *Conduct of the Persian Gulf War*, p. 3; US News and World Report, *Triumph Without Victory*, (NY: Times Books, 1992), pp. 7-13.

<sup>235</sup> Blackwell, *Thunder in the Desert*, pp. 69-71; Freedman and Karsh, p. 67; Scales, p. 45; US DoD, *Conduct of the Persian Gulf War*, p. 3; US News and World Report, *Triumph Without Victory*, (NY: Times Books, 1992), pp. 7-13.

<sup>236</sup> Blackwell, *Thunder in the Desert*, pp. 69-71; Gordon and Trainor, p. 32; Scales, p. 45; US DoD, *Conduct of the Persian Gulf War*, p. 3.



palace and other key government facilities.<sup>237</sup> These lead units were followed by the four Guard infantry divisions.<sup>238</sup> By 0800, the Hammurabi and Special Forces Divisions had secured the capital.<sup>239</sup> Elements of several Kuwaiti army brigades put up a brief resistance south of Kuwait City, but were quickly overwhelmed by the Tawakalnah and Hammurabi divisions.<sup>240</sup> The Iraqi Air Force had negligible impact on the operation: it conducted airstrikes on Kuwait's two major airbases that failed to hit anything of value and flew combat air patrols over Kuwait that failed to intercept any of the Kuwaiti planes that attacked the advancing Republican Guards before fleeing to Saudi Arabia.<sup>241</sup> Mopping up operations were over in less than two days.<sup>242</sup>

Like the 1988 offensives against Iran, the invasion of Kuwait was a very competent operation. The Iraqis had employed a corps-level attack over multiple axes of advance. They had employed maneuver--at least at the operational level--and had moved extremely quickly, pushing three heavy divisions 80 kilometers in about 10 hours, and then driving another 75 or so kilometers in the next 24 hours. They had staged a large-scale heliborne assault that achieved surprise and, while not without problems, achieved most of its objectives. Of course, the Iraqis were greatly helped by the small size and exceedingly limited combat capabilities of the Kuwaiti forces and dealt quickly with those units that resisted by applying overwhelming firepower. Perhaps the only mistake one can point to in the planning of the operation was the decision to move two heavy divisions (Hammurabi and Tawakalnah) through Kuwait City, where they got jammed in the narrow streets and suffered some minor losses to Kuwaiti units. When the invasion of Kuwait is compared to the invasion of Iran ten years before, the growth in Iraqi capabilities is obvious. Khuzhestan and Kuwait are of comparable size and were defended by similar-sized military contingents, although the Iranians were considerably more competent. Whereas, the invasion of Iran was painfully slow, uncoordinated, and meandering, the invasion of Kuwait was rapid, well-integrated, and very deliberate.

The invasion of Kuwait can also be compared to the 1988 offensives because it reflected all of the lessons Iraq had employed then. The invasion of Kuwait was meticulously planned months in advance.<sup>243</sup> It relied only on the Republican Guard, the most competent force in the Iraqi military.<sup>244</sup> The Guard rehearsed the entire operation repeatedly during the summer of 1990 until they could perform their tasks like clockwork.<sup>245</sup> Finally, the invasion, like the 1988 offensives, was conducted strictly by the book. It was a set-piece operation executed extremely well, and the only times it showed any signs of stress were when reality diverged from the plan, for instance when the Kuwaiti Air Force was able to conduct a few airstrikes against Iraq's armor and when Kuwaiti ground units briefly resisted south of Kuwait City. In those situations, the Iraqi response showed far less elegance than the rest of the operation--they ignored the airstrikes and simply bludgeoned the Kuwaiti Army units into surrender.

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<sup>237</sup> Blackwell, *Thunder in the Desert*, pp. 69-71; Scales, p. 45; US DoD, *Conduct of the Persian Gulf War*, p. 3; US News and World Report, p. 11.

<sup>238</sup> Blackwell, *Thunder in the Desert*, p. 72; Scales, p. 45; US DoD, *Conduct of the Persian Gulf War*, pp. 3-4;.

<sup>239</sup> US News and World Report, pp. 7-12.

<sup>240</sup> Blackwell, *Thunder in the Desert*, pp. 69-70; US DoD, *Conduct of the Persian Gulf War*, p. 3; US News and World Report, pp. 8-13.

<sup>241</sup> Blackwell, *Thunder in the Desert*, p. 70; US DoD, *Conduct of the Persian Gulf War*, pp. 3-4; US News and World Report, p. 8.

<sup>242</sup> US DoD, *Conduct of the Persian Gulf War*, pp. 3-4; US News and World Report, pp. 10-13.

<sup>243</sup> Blackwell, *Thunder in the Desert*, p. 72; GWAPS, Vol. I, Part I: Planning, p. 59.

<sup>244</sup> Blackwell, *Thunder in the Desert*, pp. 69-72; Scales, p. 45; US DoD, *Conduct of the Persian Gulf War*, p. 3; US News and World Report, pp. 7-26.

<sup>245</sup> Blackwell, *Thunder in the Desert*, p. 72; Friedman, p. 27; GWAPS, Vol. I, Part I: Planning, p. 59.

### **Iraqi Strategy for the War Against the Coalition**

When it became clear that Iraq's invasion would not go unopposed, Baghdad developed a grand strategy that it believed would help it "win" the war against the Coalition. At the purely military level, this strategy consisted not so much of defeating the Coalition forces, but merely of gaining a bloody stalemate that would force the Coalition to negotiate an end to the war.<sup>246</sup> According to both the Gulf War Air Power Survey (GWAPS), and Michael Gordon and General Bernard Trainor, Saddam and his advisers took it as an article of faith that the Western Powers, and especially the United States, would be unwilling to tolerate heavy casualties to liberate Kuwait.<sup>247</sup> As indicated by the public and private statements of Iraqi leaders, Baghdad believed that the US would be unwilling to sacrifice American lives for Kuwaiti oil. The US experiences in Vietnam and Lebanon led Saddam and his advisers to conclude that the US public did not have the stomach to slug it out with them over something so inconsequential as Kuwait.<sup>248</sup>

Iraq apparently recognized that the Coalition would begin any attack on the Iraqi forces in Kuwait with an air campaign. However, "The Iraqis never intended to contest for control of the air," but by the same token, they believed that this would be unnecessary.<sup>249</sup> In the words of the GWAPS study:

The Iraqi military did recognize that there would be a separate air campaign if war were to come; but they estimated its duration, depending on the success of defensive efforts, at no longer than approximately a week. During that time, they estimated that Coalition air attacks could inflict only limited damage on their ground forces and infrastructures. Saddam confidently assessed that the Coalition would then have to attack on the ground. . ."<sup>250</sup>

Thus, Baghdad's primary objective during the Coalition air campaign was just to get through it and get to the ground war.<sup>251</sup> In the words of Gordon and Trainor, "Iraq's plan was to endure the bombardment, not defeat the allies in the sky."<sup>252</sup> Iraq was convinced it could prevail in the ground war (by stalemating a Coalition offensive with heavy casualties, not necessarily "defeating" Coalition ground forces) and so Baghdad hoped only to ride out the air campaign with as little damage as possible.<sup>253</sup>

Based on this perspective, the Iraqi air strategy focused on causing some attrition to the Coalition air forces, but more importantly on minimizing the amount of damage the

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<sup>246</sup> Norman Cigar, "Iraq's Strategic Mindset and the Gulf War," *Journal of Strategic Studies*, March 1992, p. 14; and Janice Gross Stein, "Deterrence and Compellence in the Gulf, 1990-91," *International Security*, Fall 1992, pp. 173-176.

<sup>247</sup> Gordon and Trainor, p. 180; *GWAPS, Vol. I, Part I: Planning*, pp. 60-61.

<sup>248</sup> Iraqi transcript of meeting between US Ambassador April Glaspie and Saddam Husayn on 25 July 1990, *The New York Times*, 23 September 1990; Public Statement by Saddam Husayn on 5 September 1990, *Baghdad Domestic Service* in Arabic, 5 September 1990; Cigar, pp. 2-5; Friedman, pp. 108-110; Gordon and Trainor, pp. 180-181; *GWAPS, Vol. I, Part I: Planning*, pp. 60-64.

<sup>249</sup> *GWAPS, Vol. II, Part I: Operations*, p. 112.

<sup>250</sup> *GWAPS, Vol. II, Part I: Operations*, p. 112.

<sup>251</sup> Gordon and Trainor, p. 180; *GWAPS, Vol. II, Part I: Operations*, pp. 111-113.

<sup>252</sup> Gordon and Trainor, p. 180.

<sup>253</sup> For the clearest expositions of this belief, see Saddam's "Speech to the Islamic Conference," *Baghdad Voice of the Masses*, 11 January 1991, FBIS-NES 91-009 and Interview with Yevgenni Primakov, *Paris Europe Number One*, April 28, 1991, in FBIS-SOV 91-083, p.11. Also see, Gordon and Trainor, p. 180; *GWAPS, Vol. II, Part I: Operations*, pp. 111-113; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 125-126.

Coalition air forces could do to Iraq's strategic facilities and ground forces in the Kuwaiti Theater of Operations (KTO). Iraq's high command planned to use its fighter aircraft to pick-off stray or damaged Coalition aircraft, especially after they had conducted their strikes and were returning to base low on fuel.<sup>254</sup> The burden of actively confronting the Coalition air forces instead was placed on the shoulders of Iraq's vast arsenal of SAMs and anti-aircraft artillery (AAA).<sup>255</sup> Baghdad hoped the enormous amount of flak and missiles these forces could put up would hinder the ability of Coalition pilots to accurately attack their targets and inflict a heavy price on those that tried to press home their attacks.<sup>256</sup> Iraq had learned from the war with Iran that bunkering a target can significantly reduce its vulnerability to enemy airstrikes and the Iraqis had built very impressive passive defenses around many of their most important military facilities to guard against air attack.<sup>257</sup> The Iraqi Air Force was kept in superhardened bomb shelters, many strategic weapons facilities were protected by massive earthen berms, and most of its high level command and control facilities were located in deep underground bunkers.<sup>258</sup> During the fall of 1990, Iraq embarked on a country-wide effort to expand these defenses by bunkering, berming, dispersing, camouflaging, and sand-bagging virtually everything of military value.<sup>259</sup> In the KTO, Iraqi troops built bunkers for themselves and their command units, bermed and dispersed their tanks and other equipment, and built revetments for their supplies.<sup>260</sup> In addition, as UN inspection teams later discovered, the Iraqis began a large-scale program to secretly remove much of the equipment from key strategic weapons facilities.<sup>261</sup>

For the ground war, Iraq put together a strategy derived from its experiences against Iran, and particularly the methods it had employed to stop the offensives against al-Basrah in 1987. As it had learned against Iran, Iraq would deploy a line of infantry behind impressive earthworks and fortifications to absorb the brunt of the Coalition attack.<sup>262</sup> Behind the infantry, Iraq deployed a series of armored and mechanized reserves that would launch counterattacks to support the infantry and stop or seal a breakthrough.<sup>263</sup> Meanwhile, the Republican Guard was held as a strategic reserve, to launch a major counterattack against the flank of the primary Coalition penetration.<sup>264</sup> As had been the case against Iran, the General Staff expected little maneuver or creativity from its tactical commanders, thus the counterattacks by the local mechanized reserves were to be frontal assaults designed to halt the Coalition by simply throwing masses of armor at any penetration.<sup>265</sup> The Republican Guards would be employed in an

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<sup>254</sup> Richard Halion, *Storm Over Iraq*, (Washington: Smithsonian Institution Press, 1992), pp. 172-176; US News pp. 215-263; James Dunnigan and Austin Bay, *From Shield to Storm*, (NY: Morrow, 1992), pp. 148-149, 173-176; US DoD, *Conduct of the Persian Gulf War*, pp. 123-124.

<sup>255</sup> Cordesman and Wagner, p. 464; Halion, pp. 130-131; US DoD, *Conduct of the Persian Gulf War*, pp. 11-12.

<sup>256</sup> GWAPS, Vol. II, Part I: Operations, pp. 111-113.

<sup>257</sup> Cordesman and Wagner, p. 99; Freedman and Karsh, *The Gulf Conflict, 1990-1991*, p. 281; Halion, p. 131.

<sup>258</sup> Freedman and Karsh, *The Gulf Conflict, 1990-1991*, p. 281; Gordon and Trainor, p. 181; Halion, p. 131. For a good example of the extent of Iraqi passive defenses, see the photo of Iraq's Tuwaitha Nuclear Facility (the site of the Osirak Reactor) in US DoD, *Conduct of the Persian Gulf War*, p. 153.

<sup>259</sup> GWAPS, Vol. II, Part I: Operations, pp. 113-114.

<sup>260</sup> Cigar, pp. 18-19; Gordon and Trainor, p. 184; GWAPS, Vol. II, Part I: Operations, pp. 113-114; US DoD, *Conduct of the Persian Gulf War*, pp. 71-72.

<sup>261</sup> Gordon and Trainor, pp. 181-184; GWAPS, Vol. II, Part I: Operations, pp. 113-114.

<sup>262</sup> Gordon and Trainor, p. 163; GWAPS, Vol. I, Part I: Planning, pp. 76-77.

<sup>263</sup> Gordon and Trainor, p. 163; GWAPS, Vol. I, Part I: Planning, pp. 76-77.

<sup>264</sup> Gordon and Trainor, p. 163; GWAPS, Vol. I, Part I: Planning, pp. 76-77.

<sup>265</sup> Gordon and Trainor, p. 163; GWAPS, Vol. I, Part I: Planning, pp. 76-77; US DoD, *Conduct of the*

operational level maneuver to swing around and hit the major Coalition thrust in the flank, which hopefully would have been bloodied and slowed, if not halted, by the front-line infantry and the counterattacks of the regular Army heavy divisions.<sup>266</sup> Once again, superior mass was a major element of the Iraqi plan. Baghdad concentrated 51 of its 66 divisions in the KTO, with 3,475 tanks, 3,080 APCs, and 2,475 artillery pieces to have available the mass necessary to defeat the US-led Coalition.<sup>267</sup>

Although Iraq generally planned to fight the US-led Coalition as it had fought Iran, it apparently recognized that the Coalition could field a far more powerful armored force than Iran. One noticeable modification Iraq made to accommodate this difference was the creation of two armored corps to serve as theater reserves.<sup>268</sup> Iraqi corps previously had always been geographic entities assigned a sector of the front, responsible for all operations in that sector, and assigned forces to accomplish the corps' mission whatever it might be. In the fall of 1990, Iraq redesignated its II Corps as an armored corps commanding only the 17th Armored and 51st Mechanized Divisions.<sup>269</sup> Likewise, Baghdad created another corps-level formation called the Jihad Forces and assigned it the 10th and 12th Armored Divisions.<sup>270</sup> The Iraqi General Staff then positioned these two forces along the major north-south avenues of advance from Saudi Arabia into the KTO.<sup>271</sup> These two corps had no geographic responsibilities, but instead were to be used as theater reserves, armored fists to be launched directly against the main Coalition penetrations.<sup>272</sup> The General Staff intended to use these large armored formations to stun the main Coalition attack and set it up for the decisive counterattack by the Republican Guard.<sup>273</sup>

### **The Air War, 17 January 1991-24 February 1991**

Iraq's prewar strategy for coping with the Coalition air campaign fell apart quickly in the face of Operation Desert Storm. The first casualty of the air campaign was Iraq's integrated air defense network--the French-designed Kari system--which was built to handle small air raids from Israel or Iran and was completely overwhelmed by the thousands of sorties the Coalition threw at it.<sup>274</sup> Within the first two days of the Coalition air campaign, the Kari system was essentially shut down as an effective integrated air defense network.<sup>275</sup> The loss of the Kari system deprived Iraqi SAMs, AAA batteries, and interceptors of advanced warning of Coalition airstrikes, and prevented Baghdad from coordinating its air defense efforts.<sup>276</sup> This loss of central direction also degraded Iraq's barrage-fire AAA system, because gunners failed to stick to their assigned fields of

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*Persian Gulf War*, pp. 84, 252.

<sup>266</sup> Gordon and Trainor, p. 163; *GWAPS, Vol. I, Part I: Planning*, pp. 76-77; Lt. Col. Peter S. Kindsvatter, "VII Corps in the Gulf War," *Military Review*, February 1992, pp. 18-19; US DoD, *Conduct of the Persian Gulf War*, p. 84.

<sup>267</sup> Central Intelligence Agency, *Operation Desert Storm: A Snapshot of the Battlefield*, (Washington, DC: CIA, September 1993); and *GWAPS, Vol. I, Part I: Planning*, pp. 203-204.

<sup>268</sup> US DoD, *Conduct of the Persian Gulf War*, p. 84.

<sup>269</sup> Gordon and Trainor, p. 163; *GWAPS, Vol. I, Part I: Planning*, pp. 76-77; Kindsvatter, p. 18.

<sup>270</sup> Gordon and Trainor, p. 163; *GWAPS, Vol. I, Part I: Planning*, pp. 76-77; Kindsvatter, p. 18.

<sup>271</sup> CIA, *Operation Desert Storm*; *GWAPS, Vol. I, Part I: Planning*, pp. 76-77, 203-205.

<sup>272</sup> Kindsvatter, pp. 18-19.

<sup>273</sup> Kindsvatter, pp. 18-19.

<sup>274</sup> *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 130-142; Halion, pp. 131; US DoD, *Conduct of the Persian Gulf War*, p. 12; Bruce W. Watson, Bruce George, Peter Tsouras, B. L. Cyr, *Military Lessons of the Gulf War*, (London: Greenhill Books, 1991), pp. 157-158. The name Kari has no particular significance, it is the French spelling of "Iraq" backwards.

<sup>275</sup> Halion, p. 248; Friedman, pp. 149-168; US DoD, *Conduct of the Persian Gulf War*, p. 120.

<sup>276</sup> *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 130-142.

fire.<sup>277</sup> Moreover, Coalition aircraft conducted their strike missions above 10,000 feet, which rendered the vast majority of Iraq's AAA harmless because it could not reach this altitude.<sup>278</sup>

Iraq's SAM batteries also were quickly neutralized by US F-4G Wild Weasels armed with high-speed anti-radiation missiles (HARMs). In the first few days of the war, the F-4G/HARM combination wrought havoc with the Iraqi SAM batteries.<sup>279</sup> By the third or fourth day of the air campaign, Iraqi SAM crews refused to turn on their radars for fear of HARM attack.<sup>280</sup> Some of the braver batteries attempted to turn on their radars for only a few seconds, hoping to illuminate a target before they were located and locked-on by a HARM. Other SAM units simply launched their missiles ballistically without any radar guidance, hoping the missiles would get close enough to a Coalition jet for the terminal guidance system to lock on to it.<sup>281</sup> None of these tactics enjoyed any success.<sup>282</sup>

Baghdad's interceptors encountered similar problems. Iraq found it was unable to implement its strategy of picking off Coalition aircraft when they were disabled or at a disadvantage because there were too many Coalition fighters around.<sup>283</sup> Iraqi fighter pilots found that whenever they thought they had ambushed a group of Coalition aircraft they themselves were almost immediately intercepted by US F-15s.<sup>284</sup> As if the numeric disadvantage were not enough, Iraqi fighter pilots performed extremely poorly in air-to-air combat. Deprived of GCI guidance, Iraqi pilots were like sitting ducks: incapable of dogfighting or even fleeing effectively, they showed no aggressiveness, imagination or capacity for independent action.<sup>285</sup> As the GWAPS concluded:

The consistent and overriding pattern evident in debriefs of engagements by Coalition pilots was the evident lack of situational awareness by their Iraqi adversaries. Accustomed to relying heavily on direction from controllers on the ground, Iraqi interceptor pilots showed little capacity to adjust to dynamic engagements or to exercise much initiative. Those shot down during Desert Storm generally did not react to radar lock-on by Coalition fighters and, for the most part, performed little effective maneuvering, either offensive or defensive; time and again, the principal defensive reaction by Iraqi pilots subjected to attack by Coalition fighters was to descend to low altitude in the apparent belief that the pulse-Doppler radars of Coalition fighters could not lock onto them there.<sup>286</sup>

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<sup>277</sup> Dunnigan and Bay, p. 147; US DoD, *Conduct of the Persian Gulf War*, pp. 116,

<sup>278</sup> Dunnigan and Bay, pp. 164, 167; Friedman, pp. 147-168; GWAPS, *Vol. II, Part II: Effects and Effectiveness*, pp. 141-144; US DoD, *Conduct of the Persian Gulf War*, p. 126.

<sup>279</sup> GWAPS, *Vol. II, Part II: Effects and Effectiveness*, pp. 138-140.

<sup>280</sup> Blackwell, *Thunder in the Desert*, p. 132; GWAPS, *Vol. II, Part II: Effects and Effectiveness*, pp. 138-140; Halion, p. 173; US DoD, *Conduct of the Persian Gulf War*, p. 150; and US News p. 224.

<sup>281</sup> US Department of the Air Force White Paper, *Air Force Performance in Desert Storm*, April 1991, pp. 7-8; Friedman, p. 157; and Blackwell, *Thunder in the Desert*, p. 132.

<sup>282</sup> GWAPS, *Vol. II, Part II: Effects and Effectiveness*, pp. 109-119.

<sup>283</sup> Halion, p. 175; US DoD, *Conduct of the Persian Gulf War*, p. 126.

<sup>284</sup> Halion, pp. 193-195; US DoD, *Conduct of the Persian Gulf War*, pp. 121-127. Also, see the various stories of air-to-air engagements during the war in US News and World Report, *Triumph Without Victory*, pp. 234-236 and 250-258.

<sup>285</sup> GWAPS, *Vol. II, Part II: Effects and Effectiveness*, pp. 119-130.

<sup>286</sup> GWAPS, *Vol. II, Part II: Effects and Effectiveness*, p. 122.

As a result, Iraqi losses in air-to-air combat quickly mounted without any impact on the Coalition air offensive.<sup>287</sup>

Baghdad did try to strike back at the Coalition, primarily by launching its modified Scuds at Israel and Saudi Arabia, but this effort also went awry. Although Iraq was able to hit Israel with about 40 al-Husayn modified Scuds during the course of the war, the US and its coalition partners were able to convince Tel Aviv to refrain from retaliating.<sup>288</sup> Thus, Israel remained on the sidelines and the Coalition remained intact. Iraqi Scud attacks on Saudi Arabia also failed to have the desired effect; the presence of the US Patriot SAM system and its apparent ability to intercept the Scuds reassured the Saudi government and the international financial community that there was little threat to Saudi oil facilities.<sup>289</sup> Finally, Iraq's only ship-attack mission was thwarted by Coalition air defenses when a Saudi F-15 shot down the two Iraqi Mirage F-1s attempting to launch Exocet missiles at the Coalition fleet in the Persian Gulf.<sup>290</sup>

By the end of the first week of the war, Iraq's air strategy was in shambles. Baghdad reacted to this situation in a number of ways, all of which may have been plausible, but none of which actually worked as intended. First, the Iraqis grounded their fighter squadrons, believing they could safely ride out the Coalition air campaign in their superhardened bunkers.<sup>291</sup> However, within days, US aircraft began employing super-penetrator munitions to destroy the aircraft in their HABs.<sup>292</sup> Baghdad was thrown on the horns of a dilemma: either lose its Air Force in the air to Coalition fighters, or lose them on the ground to Coalition bombers. The GWAPS study notes that Iraq's response to this situation was that, "Faced with the possibility that the entire air force might be lost, the Iraqis opted to fly what aircraft they could to Iran."<sup>293</sup> Eventually 115 combat aircraft, including all of its Su-24s and half of its Mirage F-1s--flew to Iran although some were shot down or crashed on the way.<sup>294</sup>

### **The Battle of Khafji, January 29-31**

The other major Iraqi response to the Coalition air campaign was the operation that unfolded in the battle of Khafji. Baghdad decided it had to take action to try to compel the Coalition leadership to curtail the air campaign and launch the ground offensive.<sup>295</sup> As Gordon and Trainor describe it:

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<sup>287</sup> GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 111-113, 119-126; United States Department of the Air Force, "Reaching Globally, Reaching Powerfully: The US Air Force in the Gulf War," September 1991, pp. 32-33; General Merrill McPeak, unclassified briefing entitled "The Air Campaign: Part of the Combined Arms Operation, or 'The Mother of All Briefings,'" 1991; US DoD, *Conduct of the Persian Gulf War*, p. 126.

<sup>288</sup> For numbers of Scud launches, see McPeak briefing, "The Mother of All Briefings." For an account of the coalition diplomatic efforts to keep Israel from retaliating for the Iraqi Scud attacks, see US News and World Report, pp. 244-250; and Freedman and Karsh, *The Gulf Conflict*, pp. 331-341.

<sup>289</sup> Cigar, p. 11; Freedman and Karsh, *The Gulf Conflict*, pp. 307-309, 310-311; Hiro, p. 324.

<sup>290</sup> Lt. Col. Joseph Englehardt, *Desert Shield and Desert Storm: A Chronology and Troop List for the 1990-1991 Persian Gulf Crisis*, (Carlisle, Pa: Strategic Studies Institute, US Army War College, 25 March 1991), p. 54; and Cigar, p. 21.

<sup>291</sup> Cigar, p. 19; GWAPS, Vol. II, Part I: *Operations*, pp. 193-194; GWAPS, Vol. II, Part II: *Effects and Effectiveness*, p. 130; Halion, p. 175; US DoD, *Conduct of the Persian Gulf War*, p. 126.

<sup>292</sup> Cigar, p. 19; GWAPS, Vol. II, Part I: *Operations*, p. 217.

<sup>293</sup> GWAPS, Vol. II, Part I: *Operations*, p. 195.

<sup>294</sup> Freedman and Karsh, "How Kuwait Was Won," p. 28; GWAPS, Vol. II, Part I: *Operations*, pp. 195-196; Halion, p. 195; US DoD, *Conduct of the Persian Gulf War*, p. 129; interview with Taha Yassin Ramadan, Amman *Sawt Al-Sha'b* in Arabic, 27 May 1991, FBIS-NES-91-104, 30 May 1991, p. 23; and statement by Iraqi Foreign Minister Ahmad Husayn, *Baghdad INA* in Arabic, 12 April 1991, FBIS-NES-91-072, 15 April 1991.

<sup>295</sup> Cigar, p. 21; Friedman, p. 197; Freedman and Karsh, *The Gulf Conflict*, pp. 362-364; GWAPS, Vol. II,

Convinced that the Americans would not tolerate heavy casualties, the Iraqis' hope had been to force a stalemate on the battlefield in which the Americans took steady losses, which would stir up political opposition to the war at home. But two weeks into the war, there were no signs of an allied ground offensive and Iraq was taking a one-sided pounding from the air. For Iraq's strategy to work it needed the ground war soon. If the Americans would not march north to fight, the Iraqi army would go south and make them fight. By launching an attack, Saddam Hussein [sic] could deliver a humiliating defeat on the Saudi forces guarding the border and inflict casualties on any American units coming to their aid. Once his offensive had spurred the Coalition into a ground war, the Iraqis could withdraw behind their defenses, pulling the Americans after them and grinding them down.<sup>296</sup>

The Khafji operation was designed to trap a small Coalition force south of the "heel" of Kuwait. The attack was to be conducted by the 5th Mechanized and 3rd Armored Divisions, the corps reserve of Iraq's III Corps which had responsibility for the defense of southeastern Kuwait's border with Saudi Arabia.<sup>297</sup> The III Corps was commanded by Major General Salah Abud Mahmud, Iraq's ablest regular Army corps commander.<sup>298</sup> Moreover, the 3rd and 5th Mechanized Divisions were probably the most competent divisions in Iraq's regular Army; they had been among those retrained in 1986-1987 and had participated in several of the 1988 offensives. The plan called for elements of the 5th Mechanized Division to conduct probing attacks along the Kuwaiti heel from al-Wafrah to the coastal highway.<sup>299</sup> The 5th Mechanized Division was to push into Saudi Arabia where its probing attacks met the least resistance, and pin the weak Coalition Arab units deployed in this area.<sup>300</sup> Meanwhile, the 3rd Armored Division would sweep around their left flank and envelope them, crushing them between the two Iraqi heavy divisions and the sea.<sup>301</sup> Having badly bloodied the Coalition, the Iraqi forces would then retire across the Saudi-Kuwaiti border.<sup>302</sup>

The Iraqis initially held the advantage of surprise when they attacked on the night of 29 January because they had been able to move the 5th Mechanized Division (reinforced with a number of independent armored units) and part of the 3rd Armored Division to the Kuwaiti-Saudi border largely undetected.<sup>303</sup> Three of four battalion-sized probes conducted by 5th Mechanized Division between al-Wafrah and the coast were chased back to Iraqi lines by US Marine covering forces, however, the battalion task force moving along the coastal highway stumbled into the deserted town of R'as al-

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*Part I: Operations*, p. 272; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, p. 234; Karsh and Rautsi, p. 256.

<sup>296</sup> Gordon and Trainor, pp. 269-271.

<sup>297</sup> Freedman and Karsh, *The Gulf Conflict*, pp. 364-365; Gordon and Trainor, pp. 268-269; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, p. 235; US DoD, *Conduct of the Persian Gulf War*, pp. 131 and 256.

<sup>298</sup> Gordon and Trainor, p. 268.

<sup>299</sup> Gordon and Trainor, p. 269; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, p. 235; US News and World Report, p. 270.

<sup>300</sup> Freedman and Karsh, "How Kuwait was Won," p. 30 fn. 84; Friedman, pp. 198-199; Gordon and Trainor, p. 269; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, p. 235.

<sup>301</sup> Friedman, p. 198; Gordon and Trainor, p. 269; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, p. 235.

<sup>302</sup> Friedman, p. 198; Gordon and Trainor, p. 269.

<sup>303</sup> Freedman and Karsh, *The Gulf Conflict*, pp. 364-365; Gordon and Trainor, p. 268; *GWAPS, Vol. II, Part I: Operations*, p. 273; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 238-239.

Khafji.<sup>304</sup> Mahmud reinforced his troops in Khafji and began mustering the bulk of his armored forces along the Saudi-Kuwaiti Border for the major attack.<sup>305</sup> However, by that time the Coalition had recovered from its initial surprise and its airpower began to pound the Iraqi units.<sup>306</sup>

The next day, the full weight of Coalition airpower descended on the Iraqi armored forces as they moved out to execute the primary phase of the operation. Iraqi armored and mechanized formations were attacked relentlessly by Coalition strike aircraft and attack helicopters.<sup>307</sup> The 26th Armored Brigade of the 5th Mechanized Division got caught moving through a narrow corridor in one of the Iraqi minefields when its lead tank was destroyed by a lucky shot from a Saudi multiple rocket launcher. Coalition aircraft quickly descended on the hapless brigade and pummeled it. One survivor from the 26th Armored Brigade told his US captors that he had fought with the 26th in every major engagement of the Iran-Iraq War and that all of the damage his unit had sustained in all of those battles combined did not equal the damage they had taken during the thirty minutes they were trapped in that minefield.<sup>308</sup> General Mahmud quickly realized that his armor was being destroyed by the Coalition air forces.<sup>309</sup> He concluded that it was impossible for his forces to execute the attack plan and that his two best divisions would be destroyed if the offensive were not canceled immediately.<sup>310</sup> Consequently, the attack was called off and the two heavy divisions were sent back to their bivouac areas to escape the Coalition airstrikes.<sup>311</sup> Later on 31 January, Saudi forces finally recaptured Khafji with considerable support from US air and ground forces.<sup>312</sup>

A few comments can be offered about Iraqi combat performance at Khafji. It was planned less than a week before the start date and the forces that participated were unable to rehearse for the operation because of constant Coalition airstrikes. Ultimately, the Iraqis were never able to actually implement their plan because of the massive intervention of Coalition airpower.

At the tactical level, problems greatly outweighed successes. On the plus side, the Iraqi concealment efforts and operational security were very effective as the attack initially took the Coalition by surprise. On the minus side, Iraqi ground forces fought poorly in the small number of clashes that occurred. Against the various Marine outposts, Iraqi armor essentially just blundered into the Marine units. Not only were they not aware that the Marines were there, but when contact was made they conducted frontal assaults.<sup>313</sup> In these attacks the Iraqis fought hard initially but retreated after brief firefights that convinced them that the Marines were not going to run from an Iraqi armored charge.<sup>314</sup> In most of these engagements, the Iraqis took significant casualties without causing any real damage to the Marines. Indeed the Marines took far more

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<sup>304</sup> Gordon and Trainor, pp. 272-278; *GWAPS, Vol. II, Part I: Operations*, p. 273; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, p. 235; US DoD, *Conduct of the Persian Gulf War*, pp. 131 and 510-511.

<sup>305</sup> US DoD, *Conduct of the Persian Gulf War*, pp. 510-511.

<sup>306</sup> Gordon and Trainor, pp. 278-279; *GWAPS, Vol. II, Part I: Operations*, p. 273; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 235-237.

<sup>307</sup> Gordon and Trainor, pp. 283-284; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 235-237; US DoD, *Conduct of the Persian Gulf War*, pp. 131-133.

<sup>308</sup> This story is recounted in Gordon and Trainor, p. 286; *GWAPS, Vol. II, Part I: Operations*, pp. 273-274; and *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 240-241.

<sup>309</sup> Gordon and Trainor, p. 283.

<sup>310</sup> Gordon and Trainor, p. 283.

<sup>311</sup> Gordon and Trainor, pp. 283-287; US DoD, *Conduct of the Persian Gulf War*, p. 131.

<sup>312</sup> Gordon and Trainor, pp. 284-286; US DoD, *Conduct of the Persian Gulf War*, p. 511.

<sup>313</sup> Lt. Colonel Charles H. Cureton, *US Marines in the Persian Gulf, 1990-1991: With the 1st Marine Division in Desert Shield and Desert Storm*, (Washington, DC: Hqs, USMC, 1993), pp. 32-41.

<sup>314</sup> Cureton, pp. 32-37, 38-41.



damage from friendly fire than from the Iraqis.<sup>315</sup> The Iraqi units in the town of Khafji itself successfully resisted four or five inept Saudi attacks before eventually surrendering when the operation was aborted. However, the defense they put up was haphazard and unimpressive. They simply sat behind positions in the town and blazed away at Saudi forces that advanced slowly, had horrendous combined arms coordination, moved in a disjointed fashion, refused to support each other, and insisted on conducting frontal assaults against the Iraqis. As had been the case with Iran, a small flanking maneuver could have routed the Saudis, but the Iraqis would not move and, thanks to poor marksmanship, they did little damage to the Saudi units. Unable to rely on pre-registered, pre-planned fire missions, Iraqi artillery support was miserable, constantly lagging well behind the changing situation on the ground and largely unable to provide supporting fire to either Iraqi offensive or defensive operations.<sup>316</sup>

After Khafji failed, the Iraqis did not try another ground offensive or otherwise move to try to force the Coalition's hand. For the most part, Iraqi troops hunkered down in the KTO and tried to make it through the constant aerial bombardment. A flurry of diplomatic activity between 12 February and 23 February probably indicates that Baghdad had concluded its military was being battered too hard and could not stand up to a Coalition ground offensive as originally anticipated.<sup>317</sup> For over a week, the Iraqis and the Soviets tried to hammer out a withdrawal plan, and the Iraqis, for their part, were willing to make far greater concessions than they ever had previously.<sup>318</sup> However, Baghdad would not go so far as to unconditionally accept the various UN resolutions and so it all came to naught.

### **The Iraqi Army on the Eve of the Ground War**

The lengthy Coalition air campaign had a devastating effect on the Iraqi ground forces dug-in in the KTO. Six weeks of relentless aerial attack destroyed the morale of many of the Iraqi units in the KTO. Although Iraqi units in the KTO experienced problems with desertions even before the beginning of Operation Desert Storm, the Coalition air campaign turned a trickle of deserters into a torrent.<sup>319</sup> By the end of February some Iraqi units had been reduced to less than 50 percent of their deployed strength.<sup>320</sup> The air war was especially effective against the poorly-trained and supplied infantry divisions defending Iraq's front lines. These units were mostly manned with Shi'ah conscripts who had little love for Saddam or his war for Kuwait.<sup>321</sup>

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<sup>315</sup> Cureton, p. 46; Gordon and Trainor, pp. 272-288.

<sup>316</sup> Cureton, 32-43, 46; US DoD; *GWAPS, Vol. II, Part I: Operations*, pp. 272-276; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 238-241, *Conduct of the Persian Gulf War*, pp. 130-133; Gordon and Trainor, pp. 272-288; US News and World Report, pp. 270-271.

<sup>317</sup> Freedman and Karsh, "How Kuwait Was Won," p. 32; and Stein, pp. 170-179.

<sup>318</sup> Primakov interview, p.11; and Freedman and Karsh, *The Gulf Conflict*, pp. 377-381; Hiro, 368-369. For the text of the various Iraqi initiatives see, Micah L. Sifry and Christopher Cerf eds., *The Gulf War Reader*, (NY: Times Books, 1991), pp. 337-345.

<sup>319</sup> *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 165-169; David Kellner, *The Persian Gulf TV War*, (Boulder: Westview, 1992), p. 370; US News and World Report, p. 405.

<sup>320</sup> *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 166-167, 220; US DoD, *Conduct of the Persian Gulf War*, p. 159. As noted by *GWAPS*, desertion rates varied widely among Iraqi units in the KTO. The front-line infantry divisions were the most heavily depleted by desertions. The regular Army armored and mechanized divisions suffered fewer desertions than the infantry. The Republican Guards suffered least from desertions and were closest to their authorized strength when the ground war began.

<sup>321</sup> Michael Eisenstadt, "The Iraqi Armed Forces: Two Years On," *Jane's Intelligence Review*, March 1993, p. 125; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 166-167, 220; and US News and World Report, p. 404.

Supply problems caused by the air campaign also increased the misery which the average Iraqi soldier was forced to endure.<sup>322</sup> Although Coalition airstrikes destroyed only a very small percentage of the supplies Iraq had stockpiled inside the KTO, the Coalition air campaign shut down Iraq's logistical distribution network within the theater.<sup>323</sup> By mid-February, Iraq found itself virtually incapable of getting supplies to its front line units: Coalition fighter-bombers prevented its trucks from using the roads to the front, losses to airstrikes had significantly reduced the size of the Iraqi truck fleet, and few Iraqi drivers were willing to make the trip.<sup>324</sup>

The impact of these problems was not felt uniformly by the units in the KTO. The Republican Guard units were closest to the Iraqi supply depots and farthest from Coalition air bases, making their supply much easier.<sup>325</sup> Moreover, their importance to the regime ensured that Baghdad would spare no effort to keep them provisioned.<sup>326</sup> The armored and mechanized units of the regular Army were a bit farther from the Iraqi depots and a bit closer to Coalition air bases, but they too generally did not suffer from supply problems.<sup>327</sup> Again, it was the largely-shi'ah infantry divisions along the front lines that bore the brunt of Iraq's supply problems.<sup>328</sup> These infantry divisions were well within range of Coalition air bases--allowing Coalition aircraft long loiter times over their positions--and far from the Iraqi depots--making the supply runs especially dangerous. The infantry divisions also had the lowest priority for supplies, and Baghdad grew increasingly reluctant to squander its transport assets to supply these troops.<sup>329</sup>

Coalition airstrikes also destroyed a large number of Iraqi weapons and equipment. According to CIA estimates conducted after the war, Coalition air attacks probably destroyed or crippled 20-30 percent of the tanks, APCs, and artillery of the Iraqi heavy divisions in the KTO, and may have rendered inoperable as much as one-third of all the tanks, APCs, and artillery in the theater.<sup>330</sup> The destruction of Iraqi equipment, especially tanks, APCs, and artillery was heaviest among the front-line infantry units and was lightest among the Republican Guards, with most of the regular Army heavy divisions falling somewhere between these two extremes.<sup>331</sup> It was kept to this level only because Iraq's passive defenses--berming, camouflaging, etc.--proved highly effective against airstrikes.<sup>332</sup> Generally, only precision-guided-munitions (PGMs) were able to destroy Iraqi armored vehicles with any high rate of probability, and PGMs comprised

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<sup>322</sup> US DoD, *Conduct of the Persian Gulf War*, pp.134-135, and 159.

<sup>323</sup> GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 194-202, 224-225; US DoD, *Conduct of the Persian Gulf War*, pp. 134-135, 142.

<sup>324</sup> GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 197-202; US DoD, *Conduct of the Persian Gulf War*, pp.134-135, 144-145, 158.

<sup>325</sup> Freedman and Karsh, *The Gulf Conflict*, p. 390; GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 197-198; US DoD, *Conduct of the Persian Gulf War*, pp. 134-135, 144-145, and 254-255.

<sup>326</sup> US DoD, *Conduct of the Persian Gulf War*, pp. 144-145.

<sup>327</sup> GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 197-198; US DoD, *Conduct of the Persian Gulf War*, pp.134-135, 144-145, 254-255.

<sup>328</sup> GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 197-198; US DoD, *Conduct of the Persian Gulf War*, pp.134-135 and 144-145.

<sup>329</sup> Freedman and Karsh, *The Gulf Conflict*, p. 390; GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 197-199; US DoD, *Conduct of the Persian Gulf War*, pp.134-135; US News and World Report, pp. 294-312.

<sup>330</sup> CIA, *Operation Desert Storm*; GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 207-220. The term "rendered inoperable" refers to vehicles unable to fight against the coalition forces for any reason; primarily from destruction by air attacks and maintenance problems.

<sup>331</sup> CIA, *Operation Desert Storm*; Douglas W. Craft, *An Operational Analysis of the Persian Gulf War*, (Carlisle, Pa.: Strategic Studies Institute of the US Army War College, 1992), p. 37; Halion, p. 217; US DoD, *Conduct of the Persian Gulf War*, pp.158-160.

<sup>332</sup> Craft, pp. 37-38; US DoD, *Conduct of the Persian Gulf War*, p. 138.

only a small proportion of the ordnance dropped in the KTO.<sup>333</sup>

The predicament of Iraqi ground forces in the KTO was compounded by a variety of other problems. When the Coalition finally launched its ground offensive on 24 February, their forces were superior to the Iraqi army in the KTO in virtually every quantitative and qualitative category. After nearly six weeks of air strikes, Coalition forces exceeded the Iraqi units in the KTO in numbers of troops, numbers of tanks, numbers of APCs, and most other categories.<sup>334</sup> Moreover, Coalition equipment generally was far superior to Iraqi equipment. For example, the Coalition fielded about 2,500 top-of-the-line battle tanks such as the American M1 Abrams and the British Challenger, while the Iraqis had less than 1,000 of their best tanks in the KTO, the older and less capable T-72.<sup>335</sup>

Another major problem for the Iraqis was their lack of intelligence regarding Coalition forces, deployment, or strategy. Iraqi tactical intelligence once again produced little or nothing of value, primarily because the Iraqi army in Kuwait did little patrolling, and no long-range patrolling.<sup>336</sup> In addition, Iraq had lost the strategic assets it previously had used to compensate for its tactical shortcomings. The Coalition controlled the skies and would not allow the Iraqis to fly reconnaissance aircraft.<sup>337</sup> Iraq was at war with the US, and Russia was attempting to remain neutral, thus two of the best sources of information Iraq had relied on at the end of the Iran-Iraq war were lost to it.<sup>338</sup> All in all, Iraqi field commanders went to war with little idea of how their enemy fought, where his forces were deployed, and what he intended to do.<sup>339</sup>

### **The Ground War, 24 February 1991-28 February 1991**

When the Coalition finally launched its long-expected ground offensive, Iraq's front-line infantry divisions effectively collapsed in a mass of desertions and surrenders. Between the constant bombardment and resulting supply shortages, Baghdad's infantry had no interest in a fight and surrendered to the Coalition in the tens of thousands.<sup>340</sup> The effect of this was to completely unhinge Iraq's defensive scheme. The infantry divisions were to delay and disrupt the Coalition advance, and their disintegration meant that Coalition units frequently were on top of Iraqi reserves before they had had a chance to prepare for battle.<sup>341</sup>

On the first day of the ground campaign, two US Marine Divisions drove into the western side of the "heel" of Kuwait, breaching the Iraqi lines at several points between al-Wafrah and al-Manaqish.<sup>342</sup> The III Corps infantry divisions defending this sector of the front largely collapsed, surrendering in droves to the US, and only an immediate

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<sup>333</sup> GWAPS, Vol. II, Part II: *Effects and Effectiveness*, pp. 205-209; US DoD, *Conduct of the Persian Gulf War*, pp.138-139.

<sup>334</sup> Hilsman, p. 125; Blair, p. 105; Dunnigan and Bay, pp. 251, 286, 292-293, 300; Kellner, pp. 369-370.

<sup>335</sup> Chadwick, pp. 68-69; Dunnigan and Bay, pp. 251, 286, 292-293, and 300.

<sup>336</sup> GWAPS, Vol. I, Part I: *Planning*, p. 77; Interview with Lieutenant General William M. Keys, "Rolling with the 2nd Marine Division," in Major Charles D. Melson, Evelyn A. Englander, and Capt. David A. Dawson, *US Marines in the Persian Gulf: Anthology and Annotated Bibliography*, (Washington, DC: Hqs, USMC, 1992), p. 148.

<sup>337</sup> James W. Pardew, Jr., "The Iraqi Army's Defeat in Kuwait," *Parameters*, Winter 1991-1992, p. 20.

<sup>338</sup> On US intelligence sharing with Iraq during the Iran-Iraq war, see the sources in footnote 173.

<sup>339</sup> Gordon and Trainor, p. 185; GWAPS, Vol. I, Part I: *Planning*, p. 71; Pardew, p. 21.

<sup>340</sup> Eisenstadt, pp. 124-125; US DoD, *Conduct of the Persian Gulf War*, pp.160-161; US News and World Report, pp. 294-312.

<sup>341</sup> Scales, p. 222.

<sup>342</sup> Cureton, pp. 68, 74-88; Lt. Colonel Dennis P. Mroczkowski, *US Marines in the Persian Gulf, 1990-1991: With the 2nd Marine Division in Desert Shield and Desert Storm*, (Washington, DC: Hqs, USMC, 1993), pp. 43; US DoD, *Conduct of the Persian Gulf War*, pp. 265-267.

counterattack by the 8th Mechanized Brigade of the 3rd Armored Division--and the laborious process of wading through Iraqi POWs--slowed the Marines on the first day.<sup>343</sup> Although some Iraqi units resisted, they were quickly and almost effortlessly outflanked and overwhelmed by the Marines.<sup>344</sup> In the far west of the KTO, the French 6th Light Armored Division and the US 82nd Airborne Divisions attacked and easily overpowered the Iraqi 45th Infantry Division defending as-Salman. Most elements of the 45th put up only perfunctory fire before surrendering.<sup>345</sup> Meanwhile, the Coalition attack was proceeding so smoothly that the Coalition high command sped up the timetable of the operation and began the main US VII Corps attack that afternoon rather than the next morning as planned.<sup>346</sup> The US 2nd Armored Cavalry Regiment, leading the US 1st and 3rd Armored Divisions swung around the open right flank of the Iraqi 26th Infantry Division, holding the extreme right flank of the Iraqi VII Corps, which was the westernmost of Iraq's corps in the KTO.<sup>347</sup> Farther east, the US 1st Mechanized Division of the US VII Corps attacked the two forward brigades of the 26th Infantry Division. This division was unable to offer any effective resistance to the US forces and most of its troops surrendered after a brief fight.<sup>348</sup>

The second day of the ground war began with several Iraqi counterattacks by the local armored and mechanized reserves. In particular, General Mahmud, the Iraqi III Corps commander launched a counterattack with the 5th Mechanized Division to try to stop the Marine attack in its tracks.<sup>349</sup> In the words of Gordon and Trainor, "His plan was not to meet the Marine attack head on, but to attack out of the flames of the Burqan oil field, hitting the Marines' right flank as they headed north and catching them by surprise."<sup>350</sup> Although this was a pre-planned and rehearsed counterattack, the Iraqis were constantly thrown off balance by quick maneuvers from the Marines, and it was soon halted with heavy losses to the Iraqi units.<sup>351</sup> The Iraqis fought very hard, making repeated attacks against the Marine forces, but showed little skill, relying only on frontal assaults of the Marine positions, refusing to maneuver against the Marines to secure a tactical advantage, and showing extremely poor marksmanship.<sup>352</sup> Overall, the Marines saw the counterattack as a frightening and exhausting--but not damaging--experience.<sup>353</sup> The 5th Mechanized Division was basically wiped out at little cost to the Americans.<sup>354</sup>

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<sup>343</sup> Cureton, pp. 72-88, 265-267; Keys interview, p. 153; Mroczkowski, pp. 52-53; US DoD, *Conduct of the Persian Gulf War*, pp. 258; US News and World Report, pp. 294-312, 322-324.

<sup>344</sup> Blackwell, *Thunder in the Desert*, p. 189; Cureton, pp. 68-88; Mroczkowski, pp. 48-51; US DoD, *Conduct of the Persian Gulf War*, p. 265; US News and World Report, pp. 294-312.

<sup>345</sup> Blackwell, *Thunder in the Desert*, pp. 195-197; Katherine McIntire, "Speed Bumps: The 82nd Airborne's Shaky Line in the Sand," *Army Times*, October 21, 1991, pp. 14-77; Scales, pp. 216-217; US DoD, *Conduct of the Persian Gulf War*, p. 261.

<sup>346</sup> Scales, pp. 221-223; US DoD, *Conduct of the Persian Gulf War*, p. 262.

<sup>347</sup> Scales, pp. 223-224.

<sup>348</sup> Kindsvatter, pp. 20-24; Scales, pp. 224-232; and Jim Tice, "Coming Through: The Big Red Raid," *Army Times*, 26 August, 1991, p. 20.

<sup>349</sup> Gordon and Trainor, pp. 363-364.

<sup>350</sup> Gordon and Trainor, p. 364.

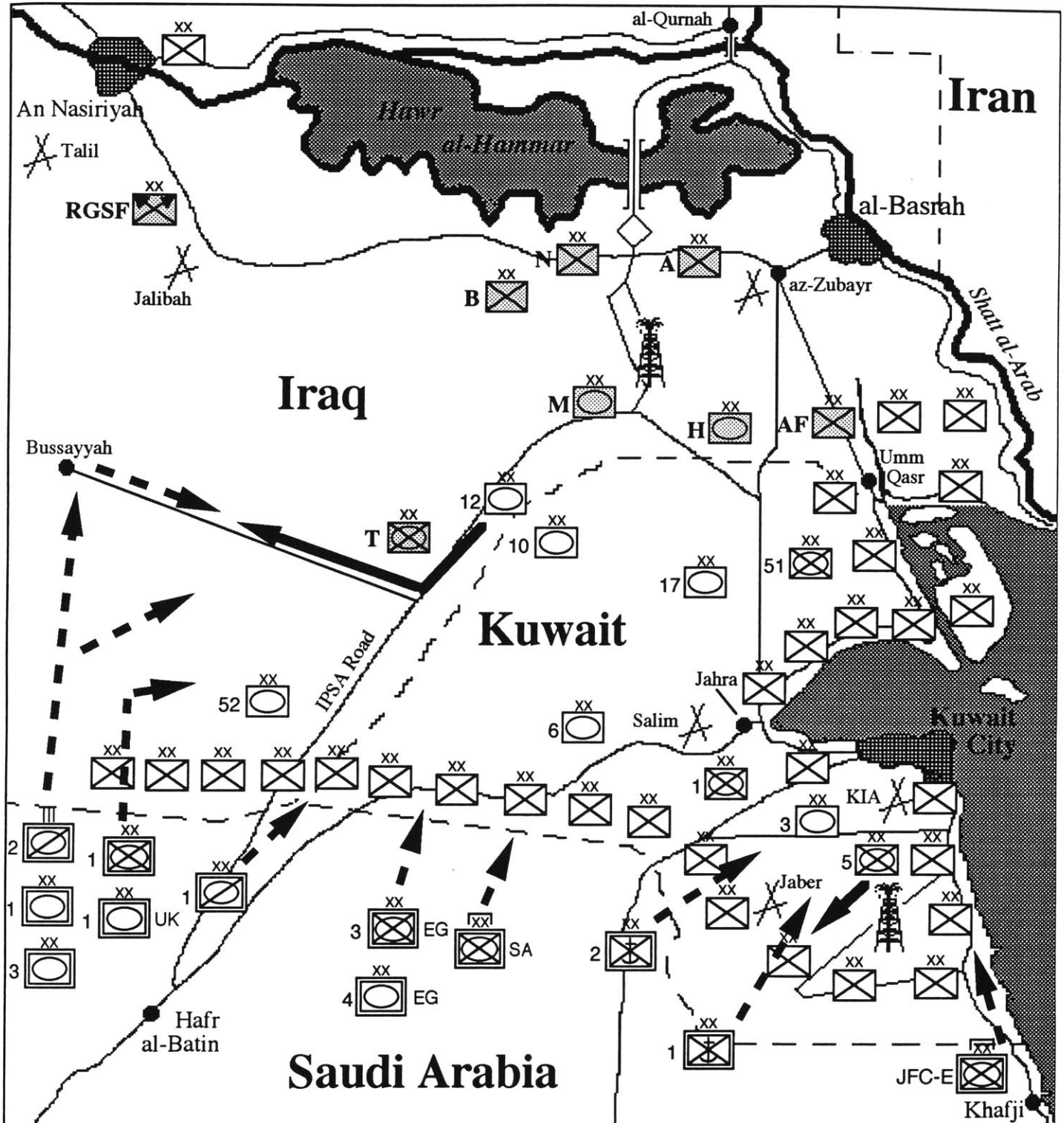
<sup>351</sup> Cureton, pp. 83, 90-96; Gordon and Trainor, pp. 364-368, US DoD, *Conduct of the Persian Gulf War*, pp. 275-276.

<sup>352</sup> Rick Atkinson, *Crusade: The Untold Story of the Persian Gulf War*, (NY: Houghton Mifflin, 1993), pp. 411-415; Cureton, pp. 90-96; Gordon and Trainor, pp. 365-369; US DoD, *Conduct of the Persian Gulf War*, pp. 275-276.

<sup>353</sup> Atkinson, pp. 411-415; Gordon and Trainor, 367-368, US News and World Report, pp. 318-319.

<sup>354</sup> Cureton, pp. 90-96; Col. John R. Pope, "US Marines in Operation Desert Storm," in Melson, et. al., p. 84.

# Initial Coalition Ground Attacks, 24-25 February 1991



- Coalition Attacks, 24-25 February  
 - Iraqi Countermoves, 24-25 February

- Iraqi Regular Army units  
 - Iraqi Republican Guard Units  
 - Coalition units

In the west, the US VII and XVIII Corps continued to roll, smashing several Iraqi formations. The US 1st Mechanized Division overran the Iraqi 48th Infantry Division, deployed to the east of the former 26th Infantry Division positions along the Saddam line.<sup>355</sup> The US 1st Armored Division assaulted the last brigade of 26th Infantry Division defending al-Bussayyah, deep behind the Iraqi front lines.<sup>356</sup> The US 2nd ACR destroyed part of a two-brigade Iraqi armored force sent out west in response to "sketchy reports of an undetermined threat approaching the KTO's exposed western flank."<sup>357</sup> Other elements of this Iraqi force were destroyed *en route* by US A-10 attack aircraft.<sup>358</sup> Finally, the US 101st Air Assault Division reached the Euphrates river near the Iraqi city of as-Samawah and skirmished with some local Iraqi Popular Army units.<sup>359</sup> These various contacts with US forces so deep along the western edge of the KTO apparently alerted Iraq's General Staff to the massive Coalition flanking maneuver and they reacted immediately.<sup>360</sup> According to GWAPS:

On the 25th, the Iraqis finally appear to have woken to the extent of the looming battlefield catastrophe. Saddam announced a general withdrawal from Kuwait. The Iraqi high command undertook to get as much of its army out of Kuwait as it could. While ill-prepared Iraqi forces scrambled to escape, the Iraqis attempted to establish two screens to cover the retreat. In the west, the Republican Guard was to gain time against the Coalition drive from the west; regular armored divisions further east were to screen the retreat from Kuwait City.<sup>361</sup>

The General Staff ordered five divisions of the Republican Guard to form a screening force to the west to try to hold back the US VII Corps.<sup>362</sup> Concerned with the safety of its key cities, the General Staff also began repositioning three other Republican Guard units to defend against a Coalition attack; the Republican Guard Special Forces Division and the Baghdad Infantry Division were pulled out of their positions in the northern KTO and ordered to move to defend the capital, while the Al-Faw Infantry Division was ordered to pull back to al-Basrah to begin preparing its defenses.<sup>363</sup> They

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<sup>355</sup> Kindsvatter, p. 25; US DoD, *Conduct of the Persian Gulf War*, pp. 272-273.

<sup>356</sup> Kindsvatter, p. 29; Gordon and Trainor, pp. 385-386; US DoD, *Conduct of the Persian Gulf War*, p. 272.

<sup>357</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Gordon and Trainor, pp. 383-385; Kindsvatter, p. 27; US DoD, *Conduct of the Persian Gulf War*, p. 272.

<sup>358</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, p. 27; US DoD, *Conduct of the Persian Gulf War*, p. 272.

<sup>359</sup> Lt. General Edward M. Flanagan, *Lightning: The 101st in the Gulf War*, (Washington, DC: Brassey's, 1994), pp. 188-191; Sean D. Naylor, "Flight of Eagles: 101st Airborne Division's raids into Iraq," *Army Times*, July 22, 1991, pp. 9 and 14; Thomas Taylor, *Lightning in the Storm: The 10th Air Assault Division in the Gulf War*, NY: Hippocrene Books, 1994), pp. 336-346; US DoD, *Conduct of the Persian Gulf War*, pp. 270-271.

<sup>360</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; GWAPS, Vol. II, Part I: Operations, p. 307; Scales, pp. 232-236, US News and World Report, pp. 334-335.

<sup>361</sup> GWAPS, Vol. II, Part I: Operations, p. 307.

<sup>362</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; GWAPS, Vol. II, Part I: Operations, p. 307; Kindsvatter, pp. 29-36; Scales, pp. 232-236; US DoD, *Conduct of the Persian Gulf War*, pp. 277-285; US News and World Report, pp. 334-336.

<sup>363</sup> GWAPS, Vol. II, Part I: Operations, p. 307; GWAPS, Vol. II, Part II: Effects and Effectiveness, p. 251. US DoD, *Conduct of the Persian Gulf War*, p. 277; US News and World Report, p. 351; "Forces 'Near Baghdad,'" *Tehran IRNA* in English, 26 February 1991, FBIS-NES-91-039, 27 February 1991, p. 21; "Heading for Baghdad," *Tehran Domestic Service* in Persian, 26 February 1991, FBIS-NES-91-039, 27 February 1991, p. 21. The Special Forces Division left one battalion of its 3rd Special Forces Brigade

also ordered three of the regular Army heavy divisions in southern Kuwait to form a similar screen to the south to cover the withdrawal of Iraqi forces against the US Marine attack threatening to bisect Kuwait at al-Jahrah.<sup>364</sup> Finally, when these units had begun moving, Baghdad announced a general retreat of all forces in the KTO to try to save as much of its army from the Coalition juggernaut as they could.<sup>365</sup>

Many Iraqi soldiers felt the order to retreat was long overdue and they seized the opportunity to flee before Coalition units caught them or Baghdad changed its mind. Iraqi units streamed north, desperate to reach the safety of al-Basrah and paying little heed to how they escaped or what they left behind.<sup>366</sup> Demoralized Iraqi troops ignored security procedures, tactical doctrine, and even the orders of their officers, in their determination to get out of the KTO as quickly as they could.<sup>367</sup> Many Iraqi units abandoned any equipment that might have slowed them down (including tanks and artillery), piled into trucks, and headed north.<sup>368</sup>

Virtually all of the remaining action on 26 and 27 February focused on the Coalition assaults on Iraq's hastily formed defensive lines. In central Kuwait, elements of the Iraqi 1st Mechanized Division fought several half-hearted engagements against the US Tiger Brigade, but did not slow it significantly as it drove to cut off the Iraqi retreat from Kuwait by taking the Matlah pass.<sup>369</sup> In southern Kuwait, The Iraqi 3rd Armored Division fought a desperate holding action around Kuwait International Airport.<sup>370</sup> The division resisted, but extremely ineffectively.<sup>371</sup> The 3rd Armored Division elements never pulled together sufficient strength to give the Marines much of a fight, instead dispersing in small units of company or platoon size that were easily dispatched by the Marines.<sup>372</sup> The most resistance the Iraqis offered was to remain in their defensive positions firing sporadically and ineffectively at the Marines--even when their positions had been outflanked.<sup>373</sup> All told, the Iraqi 3rd Armored Division lost about 70 of its T-72s around the airport while causing "only minimal casualties and equipment losses."<sup>374</sup>

The fight with the Republican Guard was considerably harder. The US VII Corps first encountered the Tawakalna 'alla Allah Mechanized Division deployed to the west of the IPSA pipeline road, protecting the Iraqi troops fleeing north along the road.<sup>375</sup> The US 2nd ACR, 3rd and 1st Armored Divisions, and later the 1st Mechanized Division, struck the Tawakalna's lines in the afternoon of 26 February and fought the Republican Guards all afternoon and all night in what is generally referred to as the Battle of the 73

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behind to cover highway 8.

<sup>364</sup> GWAPS, Vol. II, Part I: Operations, p. 307; J. Paul Scicchitano, "Eye of the Tiger: Stalking Iraqi Prey with the Tiger Brigade," *Army Times*, 10 June 1991, pp. 18 and 61; US DoD, *Conduct of the Persian Gulf War*, pp. 269 and 274.

<sup>365</sup> "Official Spokesman Says 'Withdrawal Order' Given," *Baghdad Domestic Service* in Arabic, 25 February 1991, FBIS-NES-90-038, 26 February 1991, pp. 16-17; also see GWAPS, Vol. II, Part I: Operations, p. 307.

<sup>366</sup> Karsh and Rautsi, p. 264.

<sup>367</sup> Blackwell, 204-205; Kellner, pp. 364-366.

<sup>368</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, pp. 32-33.

<sup>369</sup> US DoD, *Conduct of the Persian Gulf War*, p. 274; Scicchitano, pp. 13-61; US News and World Report, pp. 343-345.

<sup>370</sup> Cureton, pp. 108-119; Interview with Maj. General J. M. Myatt, "The 1st Marine Division in the Attack," in Melson, et. al., pp. 139-142; Pope, p. 83

<sup>371</sup> Cureton, pp. 108-119; Myatt interview, pp. 139-142; Pope, p. 83

<sup>372</sup> Cureton, pp. 108-119; Myatt interview, pp. 139-142.

<sup>373</sup> Cureton, pp. 108-119; Myatt interview, pp. 139-142.

<sup>374</sup> Pope, p. 83.

<sup>375</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, p. 29; Gordon and Trainor, p. 290; Scales, pp. 261-272; US DoD, *Conduct of the Persian Gulf War*, pp. 279-281;.

Easting.<sup>376</sup> The Tawakalna, along with some elements of the 12th Armored Division, were well-deployed in a British-style reverse-slope position with mines emplaced along the crest of the ridge.<sup>377</sup> The Tawakalna was badly outnumbered (The US forces disposed of over 1,000 tanks while the Tawakalna could muster only about 200) and badly outgunned because the armor-piercing rounds from the US M1A1 tanks could easily destroy their T-72M1s at over 4,000 meters, while the T-72's rounds could not penetrate the frontal armor of the M1 even at bore-sight range.<sup>378</sup> Despite these disadvantages, the Guard fought incredibly tenaciously, and many US servicemen remarked afterward that the battle had been more ferocious than any they had been in before, including combat in Vietnam.<sup>379</sup> The Tawakalna maintained remarkable unit cohesion, with remnants attempting to conduct a fighting withdrawal long after the division had been virtually wiped out.<sup>380</sup> By the morning of 27 February, 177 Iraqi tanks and 107 APCs were burning on the battlefield.<sup>381</sup>

The Tawakalna fought measurably better than the regular Army units but still performed significantly below Western standards, even taking into account the tremendous discrepancy in numbers and weaponry. The deployment of the division was well done, demonstrating a good understanding of reverse-slope tactics on the part of the division commander and his senior subordinates.<sup>382</sup> Similarly, in attempting to conduct their fighting retreat, Tawakalna elements tried to employ British-style bounding overwatch tactics.<sup>383</sup> In addition, the Tawakalna destroyed and damaged more US M-2/3 infantry fighting vehicles than any other Iraqi division, and actually knocked out four US M1s, a feat no other Iraqi unit was able to accomplish.<sup>384</sup>

However, the Republican Guards still displayed the same problems that plagued the rest of the Iraqi army. Guard tank gunnery was only slightly better than that of the

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<sup>376</sup> Kindsvatter, pp. 28-34; US DoD, *Conduct of the Persian Gulf War*, pp. 279-282. The Tawakalna Division had deployed in hasty defensive positions on the far side of a wadi that generally paralleled the 73 Easting grid reference line on US military maps, prompting the US 2nd ACR to dub its fight with the Tawakalna "The Battle of the 73 Easting." Other US units that participated in the battle had different names for the engagement--the 3rd Armored Division called it the "Battle of Phase-Line Bullet," and the 1st Mechanized Division referred to its part of the fight as the "Battle for Objective Norfolk." Nevertheless, each of these engagements was part of a multi-division assault against the Tawakalna's lines, and the name "The Battle of the 73 Easting" generally has been accepted as the common name for the entire battle, and not just 2nd ACR's portion of it.

<sup>377</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, pp. 26-30; Scales, p. 269; US DoD, *Conduct of the Persian Gulf War*, p. 279; US News and World Report, p. 338.

<sup>378</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, p. 29; Scales, pp. 261-291; US DoD, *Conduct of the Persian Gulf War*, pp. 279-281.

<sup>379</sup> For accounts of the tenacious resistance of the Republican Guards at the 73 Easting, see Vince Crawley, "Ghost Troop's Battle at the 73 Easting," *Armor*, May-June 1991, pp. 7-12; Col. Gregory Fontenot, "Fright Night: Task Force 2/34 Armor," *Military Review*, January 1993, pp. 38-51; Michael J. Mazarr, Don M. Snider, and James A. Blackwell, Jr., *Desert Storm*, (Boulder, CO; Westview, 1993), p. 147; Jim Tice, "Coming Through: The Big Red Raid," *Army Times*, 26 August 1991, pp. 13-20; Steve Vogel, "A Swift Kick: 2nd ACR's taming of the Guard," *Army Times*, 5 August 1991, pp. 28-61; Steve Vogel, "Metal Rain: 'Old Ironsides' and Iraqis Who Wouldn't Back Down," *Army Times*, 16 September 1991, p. 16; Steve Vogel, "The Tip of the Spear," *Army Times* 13 January 1992, pp. 13-54; and US News and World Report, pp. 336-342, 351-370.

<sup>380</sup> Kindsvatter, pp. 26-34; Scales, pp. 261-291; US DoD, *Conduct of the Persian Gulf War*, pp. 279-282; US News and World Report, p. 371.

<sup>381</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*.

<sup>382</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Scales, esp. pp. 261, 269.

<sup>383</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, pp. 35-36; Scales, pp. 261-291; US News and World Report, p. 371; Watson, et. al. p. 116.

<sup>384</sup> US DoD, *Conduct of the Persian Gulf War*, pp. 279-282; US News and World Report, pp. 336-342, 351-370.



regular Army units.<sup>385</sup> Although a handful of Tawakalnah tanks did get out and "stalk" Coalition armor to get flank shots at them--the primary reason for the division's higher number of kills--the vast majority remained in their hastily-prepared defensive positions even long after it was clear that their tank rounds could not penetrate the frontal armor of the M1s and therefore they would have to maneuver to get a flank shot if they were to have any success.<sup>386</sup> Moreover, most Tawakalnah units remained in their defensive positions even when Coalition forces had penetrated their line and were rolling up their forces from the flanks.<sup>387</sup> The Tawakalnah clung tenaciously to its defenses, but launched only a handful of counterattacks, and these were made by pitifully small units and conducted as frontal attacks that were wiped out before they gained any momentum.<sup>388</sup> In particular, despite considerable gaps between the American units (a fact which made the Americans paranoid, so much so that they constantly imagined Iraqi penetrations into these gaps) the Iraqis never mounted a sizable counterattack into any of these seams to try to take one of the attacking US units in the flank and disrupt the entire assault.<sup>389</sup> Finally, although the Tawakalnah appears to have had at least three or four battalions of artillery still operational, they were able to do little damage to the Coalition.<sup>390</sup> Once again, the Iraqi artillery could not shift its fire to hit the fast-moving US forces, and were quickly silenced in counterbattery duels.<sup>391</sup>

The major engagements of the last full day of the ground war were fought in and around the ar-Rumaylah oilfield as the Coalition continued to assault Iraq's western defensive line to complete the encirclement of the KTO. Four Republican Guard divisions were deployed in hasty-defensive positions against the Coalition attack. At the northern end of the Iraqi defensive line, the Nebuchadnezzar Infantry Division straddled Highway 8 connecting al-Basrah and an-Nasiriyah. At the southern end, the Madinah Armored Division defended the IPSA pipeline road as it turned east into the ar-Rumaylah oilfields. In the gap between these two divisions, the Adnan Infantry division had taken up positions, while the Hammurabi Armored Division waited in reserve behind the Nebuchadnezzar and the Adnan.<sup>392</sup>

The Nebuchadnezzar Division resisted the advance of the US 24th Mechanized Division throughout the day, but suffered crippling losses in the process. The Nebuchadnezzar fought by falling back from one defensive line to the next and the US division spent virtually the entire day pushing through the Nebuchadnezzar's positions.<sup>393</sup>

<sup>385</sup> Kindsvatter, pp. 26-34; Scales, pp. 261-291; Scales, p. 268; US News and World Report, pp. 336-342, 351-370.

<sup>386</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Gordon and Trainor, pp. 390-395; Kindsvatter, pp. 26-34; Scales, pp. 213-215, 261-291; Scales, pp. 261-291; US News and World Report, pp. 336-342, 351-370.

<sup>387</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, pp. 26-34; Scales, pp. 261-291.

<sup>388</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kindsvatter, pp. 26-34; Scales, pp. 261-291; US News and World Report, pp. 336-342, 351-370.

<sup>389</sup> Compare CIA, *Operation Desert Storm: A Snapshot of the Battlefield*, with Scales, pp. 261-291, esp. p. 276. The battle was fought during a sandstorm, and between the swirling sands and the chaos of battle, a number of US units apparently mistook Iraqi units that suddenly opened fire on them from their defensive positions for Iraqi forces that had actually driven at them in a counterattack.

<sup>390</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Scales, pp. 257, 298; US DoD, *Conduct of the Persian Gulf War*, p. 281.

<sup>391</sup> Kindsvatter, pp. 26-34; US DoD, *Conduct of the Persian Gulf War*, p. 281.

<sup>392</sup> All Iraqi unit deployments as depicted in CIA, *Operation Desert Storm: A Snapshot of the Battlefield*.

<sup>393</sup> Blackwell, *Thunder in the Desert*, 207-208; Blackwell, "Georgia Punch," pp. 22-61; CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Major Jason K. Kamiya, *A History of the 24th Mechanized Infantry Division Combat Team During Operation Desert Storm*, (Fort Stewart, Georgia: Hqs, 24th Mechanized Division, 1992), pp. 31-32; Scales, pp. 305-308; US News and World Report, pp. 391-393.

Once again, Iraqi artillery proved virtually useless. Pushing down Highway 8 the 24th Mechanized Division came under heavy artillery fire from the Nebuchadnezzar. However, the Americans quickly realized that the Iraqis had placed 55-gallon drums in the area and had pre-registered their guns on these drums. As soon as the Americans learned to avoid the 55-gallon drums they were no longer hindered by the artillery because the Iraqis could not shift their fire and instead just kept shelling the drums.<sup>394</sup> In the end, the Nebuchadnezzar division was virtually wiped out in the fighting while inflicting only very slight casualties on the 24th Infantry.<sup>395</sup>

In the early afternoon of 27 February the US 1st Armored Division struck the 2nd Armored Brigade of the Republican Guard al-Madinah al-Munawrah Armored Division in the flank and obliterated the brigade in the Battle of Madinah Ridge. The 2nd Armored Brigade was deployed in reverse-slope position along a north-south ridge line in expectation of a Coalition attack from the west.<sup>396</sup> However, the Iraqis failed to deploy adequate security and observation screens with the result that the US forces caught them by surprise.<sup>397</sup> This, plus the good visibility, which allowed the US M1 tanks to pick off the Iraqi armor from as far as 3,500 meters away--well beyond the range of the Iraqi T-72s--led to a complete rout.<sup>398</sup> Nearly 100 Iraqi tanks and APCs were destroyed in the first ten minutes of the battle.<sup>399</sup> The Republican Guards fought back, but again poor marksmanship, the unwillingness of Iraqi tankers to leave their defensive positions to maneuver against the US forces, and the inability of Iraqi artillery to shift fire from its pre-designated fire missions prevented them from having any significant impact.<sup>400</sup> Indeed, one anecdote from a meeting between the US VII Corps commander, Lt. General Franks, and the US 1st Armored Division commander, Maj. General Griffith, recorded in the official US Army history concisely displays the problems of Iraq's artillery batteries:

Griffith was briefing his commander [Franks] when one of many Iraqi artillery concentrations hit nearby, causing some concern to VII Corps staff officers, one of whom turned quizzically to Griffith's aide and asked, "What's that, some short rounds from our artillery?" Robinson shook his head and offered, "Nah, that's Iraqi artillery." He smiled at the officer's confused expression and said, "Don't worry, that's about the fifth barrage they've fired, but they don't move it. It just goes into the same place every time."<sup>401</sup>

A small force from the Madinah tried to mount a fighting withdrawal but were quickly dispatched by Coalition armor and helicopters.<sup>402</sup> In all, 93 tanks and 73 APCs of the Madinah Division were destroyed in the engagement.<sup>403</sup>

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<sup>394</sup> Scales, p. 257.

<sup>395</sup> Blackwell, *Thunder in the Desert*, 207-208; Blackwell, "Georgia Punch," pp. 22-61; CIA, *Operation Desert Storm: A Snapshot of the Battlefield*; Kamiya, pp. 31-32; Scales, pp. 305-308; US News and World Report, pp. 391-393.

<sup>396</sup> Atkinson, p. 466; Scales, pp. 292-293; US News and World Report, p. 380; Steve Vogel, "Metal Rain: 'Old Ironsides' and the Iraqis Who Wouldn't Back Down," *Army Times*, 16 September 1991, pp. 12-61.

<sup>397</sup> Atkinson, p. 466; US News and World Report, p. 384; Vogel, pp. 12-13.

<sup>398</sup> Scales, p. 293; US News and World Report, p. 384; Vogel, pp. 12-61.

<sup>399</sup> Scales, pp. 292-299; US News and World Report, pp. 380-383, 385.

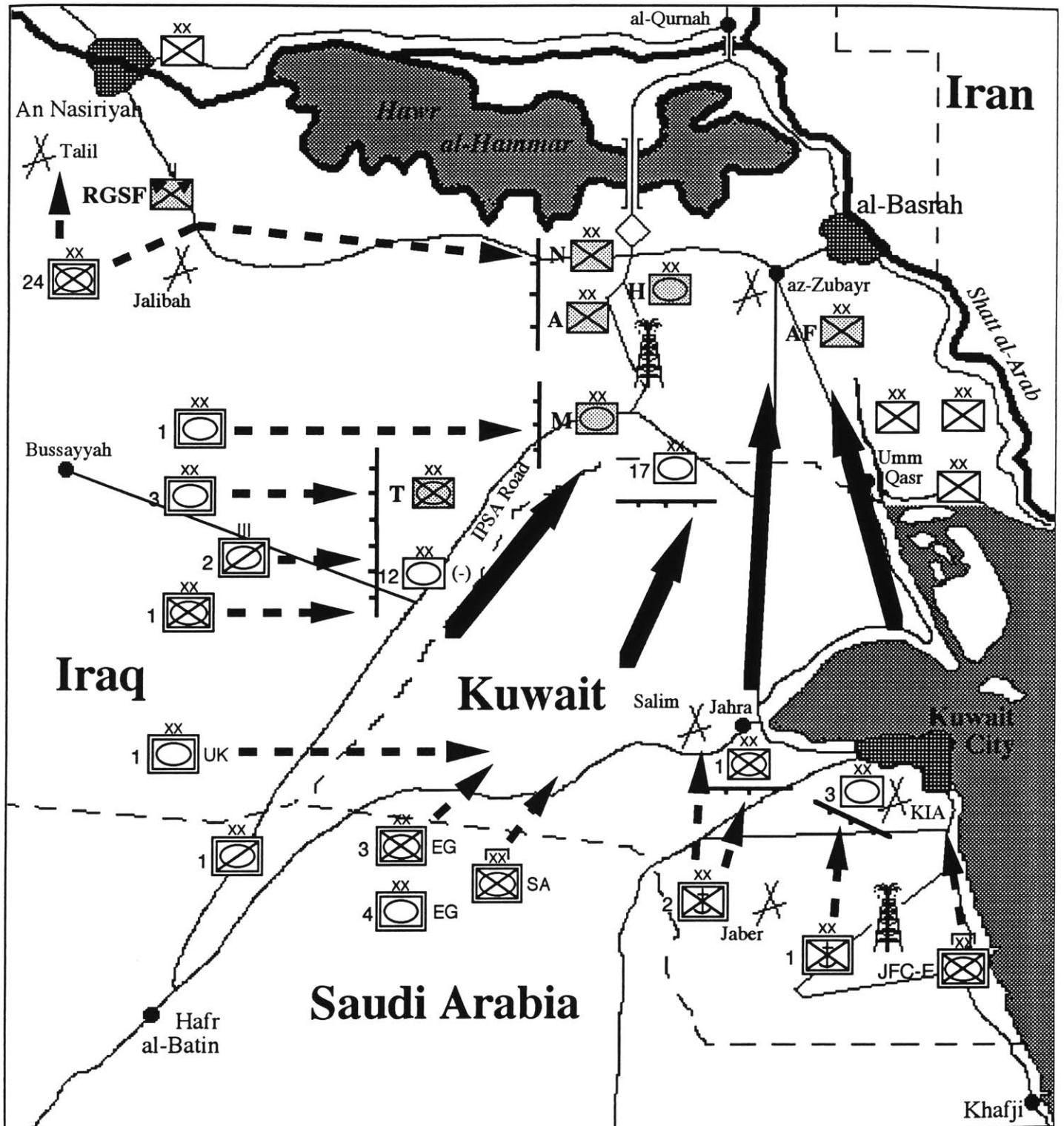
<sup>400</sup> Atkinson, pp. 466-467; Gordon and Trainor, p. 408; Scales, pp. 292-300; US News and World Report, p. 383; Vogel, pp. 12-61.

<sup>401</sup> Scales, p. 298.

<sup>402</sup> US News and World Report, pp. 388-389; Kindsvatter, pp. 34-36; Blackwell, *Thunder in the Desert*, pp. 205-207; Vogel, p. 61.

<sup>403</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*.

# Final Battles of the Gulf War, 26-27 February 1991



- Coalition Attacks, 26-27 February
- Iraqi Army Retreat, 26-27 February
- Iraqi Defensive Lines 26-27 February

- Iraqi Regular Army units
- Iraqi Republican Guard Units
- Coalition units

The Battle of Madinah Ridge and the other fighting in the ar-Rumaylah oil field were the last significant combat of the Gulf War. By the end of 27 February, Coalition forces controlled four-fifths of Kuwait's territory and had cut off virtually all routes of escape to al-Basrah.<sup>404</sup> That night the Hammurabi Armored Division (which had escaped virtually unscathed during the ground war) and the remaining brigades of the Madinah Armored Division pulled back to the az-Zubayr area and began forming a new defensive line.<sup>405</sup> The Iraqis no doubt expected to have to fight to defend al-Basrah and these Republican Guard Divisions would have served as the key elements in such a battle.<sup>406</sup> The Iraqis, however, were spared from having to defend al-Basrah by the Coalition decision to suspend combat operations at 0800 hours on 28 February.

### **General Observations on Iraqi Military Performance During the Gulf War, 1990-91**

The forty-three days of Operation Desert Storm constituted one of the most decisive defeats in modern military history. A wide range of factors contributed to that defeat. While most have been highlighted above, several others bear inclusion. One important element of the Iraqi defeat was that the Iraqis expected a slow-moving battlefield on which armored forces might advance quickly for brief spurts, but generally the armies would maneuver at an infantryman's pace.<sup>407</sup> The Iraqis expected the fighting would be characterized by brief, sharp clashes followed by long periods of regrouping and reorganization. Although Baghdad clearly recognized the Coalition would be able to rely on air power to a greater extent than had Iran, the Iraqis nevertheless expected that combat would be limited to the front lines and that rear areas would generally be quiet.<sup>408</sup> In particular, the Iraqis expected to be able to reposition their forces, commit reserves, bring up reinforcements, and concentrate their forces for counterattacks relatively easily.<sup>409</sup> The fact that the Coalition did not play by these rules was a tremendous problem for the Iraqis. The pace of Coalition operations, particularly the American and British forces, constantly kept the Iraqis off-balance and desperately trying to keep-up. Many Iraqi operations were mooted simply because the Iraqis could not implement them in time before the Americans were on top of them.

Another problem for the Iraqis was maintenance. Iraq had low operational readiness rates even before the war began. For example, 20 percent of the Iraqi Air Force was grounded because of maintenance problems. The loss of their foreign technicians greatly exacerbated these problems. Of course, the Coalition air campaign were disastrous for Iraqi maintenance practices. Iraqi vehicle crews learned quickly that Coalition aircraft were targeting their vehicles and weapons but rarely went after personnel bunkers. Consequently, few Iraqis were willing to go near their vehicles and maintenance was virtually forgotten.<sup>410</sup> Moreover, broken or damaged equipment could not be sent back to rear area repair depots because Coalition aircraft prevented movement along the roads.<sup>411</sup> The Iraqis also were completely unable to bring replacement vehicles

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<sup>404</sup> US DoD, *Conduct of the Persian Gulf War*, pp. 290-292.

<sup>405</sup> Kindsvatter, p. 36; US News and World Report, pp. 389-391, 397-398, and 401-402; Blackwell, *Thunder in the Desert*, p. 208.

<sup>406</sup> Indeed, the Hammurabi already had begun to establish defensive positions at the approaches to Al Basrah. US DoD, *Conduct of the Persian Gulf War*, pp. 284-285.

<sup>407</sup> Cigar, p. 17; GWAPS, Vol. II, Part I: Operations, p. 301.

<sup>408</sup> Cigar, p. 18-19.

<sup>409</sup> This assessment is based on the disposition of Iraqi reserves and their assigned missions. As noted previously, the experience of the Battle of the Khafji probably caused some Iraqi officers to reevaluate these assumptions, however, by that time it was too late to do anything about it.

<sup>410</sup> GWAPS, Vol. II, Part II: Effects and Effectiveness, p. 225; Halion, pp., 202-203; US DoD, *Conduct of the Persian Gulf War*, pp. 139-140.

<sup>411</sup> GWAPS, Vol. II, Part II: Effects and Effectiveness, pp. 196, 199-201; US DoD, *Conduct of the Persian*

or equipment into the theater to make up for losses. As a result, by the beginning of the Coalition air campaign, a great many Iraqi weapons and vehicles were inoperable because of inadequate maintenance.

Air defense was another real problem for the Iraqis. In particular, the Iraqis failed to provide adequate air defense of the main roads throughout the KTO.<sup>412</sup> This neglect almost certainly reflected the experience of the Iran-Iraq War when the Iranian air force was incapable of sustaining an interdiction campaign against the Iraqis. The result was the shut down of the logistical distribution system in the theater. Ultimately, Iraqi logistics were more than adequate, moving enormous amounts of supplies into the theater well before the war began.<sup>413</sup> Similarly, before the air campaign started, the Iraqis generally were able to keep their troops well-supplied, with the exception of a few infantry divisions deployed in the far west of the KTO where roads were few and poor.<sup>414</sup> However, all of this collapsed under Coalition interdiction operations because the Iraqis did not provide air defenses along the main supply routes.

Information was a problem at every level. First, there was the poverty of Iraqi intelligence which could not provide any information of value to anyone in the Iraqi military hierarchy.<sup>415</sup> Prior to the Gulf War, the General Staff had concluded that Iraqi tactical intelligence was so bad that it stripped the reconnaissance units from all tactical formations and consolidated them at division-level.<sup>416</sup> However, this does not seem to have helped much because the problems persisted. For example, on 24 February, Iraqi reconnaissance misidentified the main VII Corps attack as a small force of 12 French tanks and APCs, and so the General Staff did not realize until 24 hours later where the main Coalition attack was coming from.<sup>417</sup> On 2 March, after the cease-fire, the Hammurabi failed to reconnoiter the road it was taking to move out of the KTO and so was not aware that its route was occupied by the US 24th Mechanized Division--which mauled a brigade of the division when it tried to pass through.<sup>418</sup> Lawrence Freedman and Efraim Karsh note that Iraqi commanders sent out only "occasional patrols," and most officers were reduced to listening to foreign radio broadcasts for information on their adversary.<sup>419</sup> Moreover, what little information was gleaned from intelligence was regularly abused at all levels of the chain of command. According to GWAPS:

Whatever information was available to the General Staff was not shared with tactical commanders. Each corps daily disseminated a general daily situation report but provided little else in the way of detailed intelligence, and division commanders likewise rarely shared information with their subordinates. . . . Commanders frequently misreported the condition of their units--particularly readiness and maintenance problems, low morale, and widespread desertions. . . ."<sup>420</sup>

Without doubt, however, Iraq's greatest problem was the limited capabilities of its tactical formations. Setting aside the superior performance of Western equipment over

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*Gulf War*, pp. 134-136.

<sup>412</sup> *GWAPS, Vol. I, Part I: Planning*, p. 74; *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 192-202.

<sup>413</sup> *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 192-195.

<sup>414</sup> *GWAPS, Vol. II, Part II: Effects and Effectiveness*, pp. 196-202.

<sup>415</sup> *GWAPS, Vol. I, Part I: Planning*, p. 71; Pardew, p. 23.

<sup>416</sup> *GWAPS, Vol. I, Part I: Planning*, p. 77.

<sup>417</sup> Gordon and Trainor, p. 384.

<sup>418</sup> Gordon and Trainor, p. 436.

<sup>419</sup> Freedman and Karsh, *The Gulf Conflict*, p. 387.

<sup>420</sup> *GWAPS, Vol. I, Part I: Planning*, pp. 71-72.

Iraq's largely Soviet arsenal, Iraqi units simply could not fight at the same levels of effectiveness as the British, French, and especially, American soldiers and officers who made up the core of the Coalition military forces. Iraqi tactical commanders were terribly inflexible and therefore incapable of adequately responding to the constant maneuvering, deception, and speed of the Coalition forces. Time and again, the response of Iraqi units to being surprised or outflanked was either to do nothing, to keep doing what they were already doing, or to flee. Only rarely did Iraqi junior officers even try to devise quick responses to unforeseen developments.

Combined arms at tactical levels was similarly poor. While the initial deployment schemes of Iraqi units did a good job of weaving together infantry, armor, anti-tank units, artillery and other supporting arms into a cohesive pattern, this was the product of the five months Iraqi division and corps commanders had had to plan and inspect the dispositions of their subordinates. On other occasions, Iraqi combined arms cooperation was almost non-existent. For example, the 5th Mechanized Division counterattack out of the Burqan oilfield featured large concentrations of armor, and infantry, and artillery support--but none of them together. Most of its attacks consisted of armored charges without either infantry or artillery support.<sup>421</sup> Likewise, when the Republican Guard Madinah and Tawakalnah Divisions redeployed to the west to meet the US VII Corps attack their new defensive deployments displayed only very haphazard integration of infantry and armor. The dispositions of the two divisions along their defensive lines show little interspersing of tanks and APCs.<sup>422</sup> While both the tanks/APCs and the infantry of the Tawakalnah were very active against the US forces, it was generally the case that in any given sector US forces had to worry about T-72s or mechanized infantry, but rarely both.<sup>423</sup>

Iraqi corps and division commanders performed unevenly. On the one hand, some Iraqi senior field commanders stood out as highly competent such as the III Corps commander, General Mahmud, and the commander of the Tawakalnah Mechanized Division of the Republican Guard. With the exception of the inattention of the Tawakalnah commander to proper combined arms noted above, both of these generals appear to have handled their forces as well as they could have under the circumstances. Mahmud came up with a commendable plan of attack for the Khafji operation; recognized quickly that his command was being shredded in the Khafji operation and ordered a retreat; and then, during the coalition ground offensive, set up a well-devised counterattack out of the Burqan oilfield that employed operational level maneuver to catch the US Marines in the flank. Similarly, the Tawakalnah deployed to meet the US VII Corps attack in a very cleverly designed reverse-slope position, it had ample observation posts in front of its positions, the division fought ferociously in combat against vastly superior forces, and--like few other Iraqi units--its formations correctly employed bounding-overwatch tactics. However, there were seven other Iraqi corps commanders and 50 other division commanders in the KTO and we have little information on which to reach a judgment. Many probably did not have the chance to prove their worth because their units collapsed under the strain of the Coalition air campaign. Some seem to have performed competently in their tasks, such as the commanders of the Republican Guard's Nebuchadnezzar, Adnan, and Madinah divisions, all of whom devised fairly impressive hasty defenses when their units repositioned to meet the Coalition attack. Others seem to have done little to mitigate the factors working against their troops, and may have done much to exacerbate them.

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<sup>421</sup> Atkinson, pp. 411-415; Cureton, pp. 90-96; Gordon and Trainor, pp. 365-369; US DoD, *Conduct of the Persian Gulf War*, pp. 275-276; US News and World Report, pp. 318-319.

<sup>422</sup> CIA, *Operation Desert Storm: A Snapshot of the Battlefield*.

<sup>423</sup> Gordon and Trainor, pp. 390-395; Kindsvatter, pp. 26-34; Scales, pp. 213-215, 261-291; Scales, pp. 261-291; US News and World Report, pp. 336-342, 351-370.

By comparison, Iraq's strategic leadership, led once again by General Husayn Rashid (then the Chief of Staff of the armed forces), turned in a very credible performance given what they had to work with. Iraq's greatest mistake was to fight the Coalition rather than finding a way to negotiate its way out of Kuwait. This was a political decision, not a military one, ultimately made by Saddam, not the Iraqi GHQ.

Saddam's decision to fight clearly reflected a misunderstanding of the balance of forces between the US and Iraq. We know too little about Iraqi decision-making to know if the General Staff was even asked its advice on this issue; however, even if they were, and even if they shared this misunderstanding of the balance of power, this would have to be considered a severe mark against their judgment, but it isn't necessarily a sign of bad generalship. The Iraqis did not understand what Coalition air power could do to their ground forces in the KTO. The Iraqis did not understand the Coalition's ability to supply its forces and navigate in the trackless desert of southern Iraq and so left its western flank unguarded.<sup>424</sup> The Iraqis did not understand how Coalition airpower could maul its heavy divisions when they left their protective revetments and so had two of its best divisions badly beat up at Khafji. The Iraqis did not understand that their T-72s simply could not stand up to the US M1A1. Like Hannibal, Napoleon, and many of Germany's best WW II generals, the Iraqi high command failed to understand the power of their enemy and so were defeated. This is not to claim that the Iraqis were in the same league as these great commanders, only to point out that poor judgment is not necessarily a sign of incompetence.

Once we get beyond Iraq's gross underestimation of its adversary, the Iraqi General Staff's performance looks pretty good. Specifically, given the limitations of the forces at their disposal their strategic choices must be considered quite good. For instance, a major criticism often leveled at Iraq's plan is that the Iraqis should have realized that a set-piece defense-in-depth would not work against the powerful armored forces of the Coalition. Many critics argue instead that Iraq should have employed a mobile defense. But the Iraqi armed forces could not have effectively prosecuted any other kind of defensive scheme--particularly not a mobile defense. The dearth of tactical aggressiveness and independence of action among junior officers; the inability of their tactical units to maneuver, to react to unforeseen events, and to conduct ad hoc operations efficiently; and the constant disintegration of combined arms cooperation, all meant that Iraqi forces simply could not have fought with any degree of skill or flexibility in a mobile defense.

Instead, the Iraqis relied on a strategy based on what their troops were capable of doing. Iraq's engineers could build first-rate fortifications. Iraq's infantry could defend tenaciously when well dug-in and when not expected to maneuver. Iraq's armor could mass devastating firepower and smash into enemy formations when they knew where the enemy was located and he was located right in front of them. This approach wasn't just Iraq's best strategy, it was really their only possible strategy. Asking their tactical forces to do anything more than this would have been a very poor strategic decision. This assertion is borne out by the actual history of the war, in which the Iraqi forces did reasonably well when they stuck to these missions, but became helpless when they had to fight in fluid, maneuver battles.

If the coalition had played into Iraq's hands, the Iraqis almost certainly would have done better. There is no question that the Coalition still would have won handily because its advantages over Iraqi forces at the tactical level in equipment and tactical skill were overwhelming. However, if the Iraqis had been able to implement their strategy, and thus fight in the manner that suited their strengths, they almost certainly would have been able to inflict significantly more casualties on the Coalition than was actually the

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<sup>424</sup> On Iraq's misunderstanding of Coalition capabilities to move large forces through the trackless desert of the western KTO, see Gordon and Trainor, p. 353; *GWAPS, Vol. I, Part I: Planning*, p. 71; US News and World Report, pp. 290-291, 311.



case. The Coalition prevailed at so little cost largely because their militaries would not let the Iraqis fight set-piece operations, but instead made them fight maneuver battles, which the Iraqis were simply incapable of doing.

Most of Iraq's strategic decisions during the war also were quite sound. When the Iraqis realized that the air war was starting to hurt they moved to get the ground war started in the only way they could: they launched a ground offensive. When this failed, and revealed that more such operations would severely degrade Iraq's armored forces, they called it off and dug in deeper. Some analysts have criticized the Iraqi high command for not changing its strategy after Khafji when the devastation wrought by Coalition air power demonstrated that Iraqi heavy divisions would not be able to move and concentrate to counterattack as envisioned in their defensive scheme.<sup>425</sup> It is hard to see how the Iraqis could have changed their strategy at this point. Other than withdrawing from Kuwait, a political decision that was not the military's to make (and which Saddam may have been trying to do two weeks later), there was nothing the General Staff could do. They could hardly reconfigure their defenses under the constant Coalition air attacks and, as noted above, they already were using the one strategy their forces were actually capable of executing. After Khafji, the only thing the Iraqis might have done was to deploy more tactical air defenses with their heavy divisions to try to minimize the damage Coalition airstrikes could do to them.

As mentioned above, failing to deploy air defenses to protect the roads in the KTO was a significant mistake, but I believe this is more than made up for by the way the Iraqis handled the discovery of the VII Corps flanking attack in the west. The US Army history records that as soon as the General Staff became aware of the US threat in the western KTO, "GHQ [the Iraqi General Staff] directed General al-Rawi, commander of the Republican Guard, to establish blocking positions to the southwest, facing the open desert. In a matter of hours and with great speed and efficiency, al-Rawi had six heavy brigades from at least four divisions moving west."<sup>426</sup> The General Staff correctly recognized that the US VII Corps was the greatest threat, and moved to place its strongest forces--the Republican Guards--against it.

A critical feature of this strategic move was the decision to use the best Iraqi units to conduct the rear guard, while the mass of less-capable units escaped from the KTO. Under different circumstances, Baghdad almost certainly would have preferred to use mediocre units to screen the retreat and allow the better units to escape.<sup>427</sup> In this case, however, the General Staff apparently recognized that this was impossible. The US and Western forces of the Coalition had demonstrated an ability to destroy Iraqi units extremely quickly and efficiently, and the General Staff probably assessed that only the best Iraqi units--the Republican Guard divisions and the better heavy divisions of the regular Army--had the skill, strength, and mobility to successfully delay the Coalition forces and have a chance of disengaging and withdrawing when their mission was completed. Baghdad apparently calculated that if it used any but its best troops to screen its withdrawal, Coalition forces would simply roll over the rear guard and catch its retreating units from behind. Therefore, if *any* Iraqi units were to escape from the KTO, Baghdad would have to risk the destruction of its best units by committing them to the rear guard.

Thus, despite the enormity of Iraq's military defeat, the manner in which Baghdad's military leadership was able to conduct their retreat from the KTO enabled them to snatch something of a victory from the jaws of total defeat. Despite all of their mistaken assumptions about the war, at the crucial moment, the Iraqi General Staff quickly put together an effective operation to save as much of their military as was

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<sup>425</sup> See Gordon and Trainor, p. 287.

<sup>426</sup> Scales, p. 233.

<sup>427</sup> Blackwell, *Thunder in the Desert*, pp. 187-188.



possible. The determined stand by several Iraqi units--mostly Republican Guard divisions--on 26 and 27 February, allowed a larger number of other--albeit, mostly inferior--Iraqi units to escape destruction. The sacrifice of the Tawakalnah, Adnan, and Nebuchadnezzar Divisions, the 2nd Armored Brigade of the Madinah Division, the regular Army's 3rd Armored Division, and a handful of other units, allowed the survival of the forces Baghdad relied on to suppress the shi'ah and the Kurds after the war. Moreover, the escape of other Republican Guard units left Saddam with a core of competent, relatively powerful, formations to spearhead the campaigns against the internal insurrection. To some extent then, the Iraqi civil war can be said to have been won on the battlefields of the 73 Easting and Madinah Ridge.

### **Summary: Iraqi Military Effectiveness 1947-1991**

Iraqi military effectiveness between 1945 and 1991 parallels the Egyptian experience very closely. Both countries enjoyed mixed success at the strategic level, but were constantly plagued by extremely poor tactical capabilities. In most cases, Iraqi generals were prevented from obtaining all that they might have with the resources at their disposal because of the limitations of Iraqi field units. In addition, Iraqi and Egyptian forces shared almost identical patterns of strength and weakness among their tactical units, demonstrating a reasonably good ability to perform set-piece offensives and static defensive operations, but almost entirely incapable of fighting fluid maneuver battles.

With regard to Iraqi generalship, no clear pattern emerges. In some cases, Iraqi strategic leadership was quite good, such as during the latter half of the Iran-Iraq war. At other times it was miserable, such as at the start of the Iran-Iraq war and in the War of Israeli Independence. For the most part, Iraqi generalship was adequate, if not fairly good. During the latter half of the first Kurdish campaign, the entire second Kurdish campaign, and the Gulf War, Iraq's generals performed mostly competently, and at times quite well. Of greatest importance, in each of these cases the Iraqi high command came up with what was probably the best strategy available to it. In some instances, these fluctuations were clearly tied to politicization of the military. For example, Iraqi strategic incompetence during the first half of the Iran-Iraq war was unquestionably the result of Saddam's extreme commissarism. Likewise, the dramatic improvement in Iraqi strategic leadership in the second half of the Iran-Iraq war reflected Saddam's depoliticization after the disastrous early battles of the war.

By contrast, Iraqi tactical performance remained constant. Regardless of the degree of commissarism, the reliance on Soviet models, or the socio-economic level of Iraqi personnel, Baghdad's junior officers performed very poorly. Iraqi commanders from platoon to brigade, and even division level, repeatedly showed little aggressive initiative, little willingness to innovate or improvise, little ability to adapt to unforeseen circumstances, and little ability to act independently. Iraqi forces were virtually oblivious to tactical maneuver, and reacted poorly to enemy maneuvers, often failing to do anything at all in response. Intelligence gathering and information flows throughout the chain of command were perverse and most Iraqi units fought their battles in a haze of misinformation. Iraqi forces used their tanks like moveable cannon, their artillery was incapable of anything but pre-planned, pre-registered bombardment missions, and combined arms usually could only be engineered by the direct intervention of the General Staff. The Iraqi Air Force was mostly even worse than the ground forces, with the one exception of the small number of Mirage F-1 pilots who during the latter half of the Iran-Iraq War developed a very modest air-to-air capability and some real air-to-ground capability. This exception was noteworthy because there were so few Mirage F-1 pilots (the vast majority having been washed out of the French training program) and even with

advanced equipment and Western training, this cream of the Iraqi crop achieved only a marginal improvement in effectiveness over their compatriots.

Iraqi forces consistently had problems because of a dearth of technical skills and a limited exposure to machinery. As a result, Iraqi troops were never able to realize the full capabilities of the sophisticated equipment they fielded. Iraqi maintenance and repair was almost non-existent, Iraqi forces took extremely long periods of time to learn to handle new weaponry (even simple Soviet weapons), and with the exception of a few high priority projects that received lavish resources and Iraq's best scientific minds, the Iraqi arms industry was a disaster.

Nevertheless, like the Egyptians, there were also areas of real Iraqi strength, and other important areas where the results were consistently mixed. Two categories that stand out as areas of real Iraqi strength were logistics and combat engineering. Similarly, Iraqi soldiers fought bravely in every one of Baghdad's wars. This is not to say that there were not instances of cowardly behavior, or even of entire units surrendering. However, on balance, Iraqi personnel fought hard even in extremely difficult situations. For example, what stands out in the Gulf War is not that 150-200,000 men deserted during the 42-day Coalition air campaign, or that another 80,000 surrendered largely without a fight during the Coalition ground campaign, but that another 250-350,000 did not flee and some of them fought ferociously. After six weeks of constant pounding, with their logistical network destroyed, and facing a vastly superior enemy, the Iraqi soldiers (mostly Republican Guards) who fought and died at the battles of the Burqan oilfield, 73 Easting and Madinah Ridge deserve considerable credit. Similarly, while Iraqi unit cohesion varied throughout the postwar period, on balance it was probably better rather than worse. Even in their worst defeats at the hands of the Kurds in the 1960s, the Israelis in 1973, the Iranians in 1982, and the US-led coalition in 1991, most Iraqi units hung together in extremely difficult circumstances.

## Summary Chart of Iraqi Military Effectiveness, 1947-1991

Category	Wars						
	1948	1961-70	1973	1974-75	1980-86	1986-88	1991
Tactical creativity	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic creativity	Adequate	Adequate	Poor	Adequate	Poor	Good	Adequate
Information flows	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Tactical initiative	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic initiative	Poor	Adequate	Poor	Adequate	Poor	Good	Adequate
Centralization/Delegation	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Simplicity of Chain of Command	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate
Tactical use of maneuver	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic use of maneuver	Poor	Adequate	Poor	Good	Poor	Good	Adequate
Employment of armor	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Employment of artillery	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Air-to-air combat skills	--	--	Poor	--	Poor	Poor	Poor
Air-to-ground operations	Poor	Poor	--	Poor	Poor	Poor	Poor
Ad hoc operations	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Set-piece operations	Poor	Poor	Poor	Adequate	Poor	Good	Adequate
Combined arms	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Unit cohesion	Uneven	Uneven	Good	Adequate	Uneven	Uneven	Uneven
Personal Bravery	Good	Good	Good	Good	Good	Adequate	Adequate
Maintenance and repair	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Assimilation of equipment	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Logistics	Adequate	Adequate	Good	Adequate	Good	Good	Adequate
Combat engineers	Good	--	--	Good	Good	Good	Good
Technical support	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Tactical intelligence	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Strategic intelligence	Poor	Poor	Poor	Adequate	Poor	Good	Poor
Operational Security	Adequate	Adequate	Adequate	Adequate	Adequate	Good	Good
Tactical leadership	Poor	Poor	Poor	Poor		Poor	Poor
Strategic leadership	Adequate	Adequate	Poor	Adequate	Poor	Good	Adequate
Ability to Plan and Execute Complex Operations	--	Adequate	Poor	Good	Poor	Good	Good
Officer rotations	--	--	--	--	Excessive	Fine	Fine
Morale (at the start of the war)	Good	Adequate	Good	Adequate	Adequate	Poor	Adequate
Attention to training	Poor	Adequate	Adequate	Adequate	Adequate	Good	Good
Direction of training	Poor	Adequate	Adequate	Adequate	Adequate	Good	Good
Ability of soldiers to benefit from military training	Poor	Poor	Poor	Poor		Poor	Poor
Preferred operational tempo	Slow	Slow	Slow	Slow	Slow	Slow	Slow
Attention to offensive operations	Poor	Adequate	Adequate	Adequate	Adequate	Good	Good
Attention to defensive operations	Poor	Adequate	Adequate	Adequate	Adequate	Good	Good
Attention to air superiority	--	--	Adequate	--	Adequate	Adequate	Adequate
Unit and service coordination	Poor	Poor	Poor	Poor	Poor	Poor	Poor
Willingness to take casualties	Low	Low	Low	Low	Low	Low	Low

A blank square indicates the theory does not necessarily make any prediction in this category.



## Chapter 8

### Jordanian Military Effectiveness, 1947-1991

After taking over the territory called Transjordan after World War I, Great Britain soon found it necessary to create a local military force to defend the territory against both internal and external threats. In October 1920, the British created a unit of 150 men called the Mobile Force under Captain Frederick G. Peake. Transjordan was in a state of near anarchy at that point, having benefited from the benign neglect of the Turks for many centuries. When Amir Abdullah ibn Husayn, descendant of the Prophet and the son of the Hashimite Shaykh of Mecca arrived in 1921 with the intent of making himself king (with British approval) his rule was not universally accepted despite his lofty pedigree. Almost immediately, Abdullah was forced to suppress a series of tribal challenges to his rule. Abdullah's military needs forced him to turn over control of his military to the British in late 1921, who in turn agreed to dramatically expand the Mobile Force under Peake. Between 1921 and 1923 the British created a force amounting to a reinforced battalion in strength--renamed the Arab Legion--which crushed a series of tribal revolts throughout the country. In addition, beginning in 1922, Arabian *Ikhwan* warriors under Ibn Sa'ud began raiding Transjordan, eager to expand the areas they had conquered for their Wahhabi version of Islam. Royal Air Force aircraft and armored cars were dispatched to Transjordan, and together with the Mobile Force/Arab Legion succeeded in stopping the tide of Saudi expansion.<sup>1</sup>

By 1926 Peake's Arab Legion had accomplished a great deal. The force had expanded to about 1,500 men and officers. A small number of the officers were British, while the rest and all the enlisted had been recruited from the settled villages of Transjordan. The Transjordanian towns supported Abdullah's centralized rule and the stability and security from Bedouin raiding it promised. The Legion had decisively defeated several of the more important and aggressive Arabian tribes, prompting Ibn Sa'ud to pragmatically rein in his *Ikhwan* from further attacks on Transjordan. Finally, by crushing the various tribal revolts, the Legion had forcefully asserted the strength of the monarchy, while demonstrating its ability to collect revenues and rule over the Bedouin tribes.<sup>2</sup>

Between 1926 and the outbreak of the Second World War, the Arab Legion underwent numerous changes. The British decided to exert greater control over the Legion and to rationalize its own military force structure in the Middle East to reduce the costs of empire. The Legion was reduced in strength, placed under the command of the British High Commissioner in Jerusalem, and relegated to internal security duties. The RAF presence in Transjordan was greatly reduced. A new force, called the Transjordan Frontier Force (TJFF) was created to handle the external security responsibilities

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<sup>1</sup> Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970), pp. 342-343; Brigadier Syed Ali El-Edroos, *The Hashemite Arab Army, 1908-1979*, (Amman, Jordan: The Publishing Committee, 1980), pp. 199-213; John Bagot Glubb, *The Changing Scenes of Life: An Autobiography*, (London: Quartet Books, 1983), pp. 95-97; P. J. Vatikiotis, *Politics and the Military in Jordan: A Study of the Arab Legion, 1921-1957*, (London: Frank Cass and Co. Ltd., 1967), pp. 47-48, 57-65.

<sup>2</sup> Be'eri, pp. 342-343; El-Edroos, pp. 209-215; Glubb, pp. 83-97; Helen Chapin Metz, *Jordan: A Country Study*, (Washington, DC: GPO, 1991), p. 234; Vatikiotis, pp. 69-71.

previously assigned to the Legion and the RAF. The TJFF was created in the image of the British Indian Army with all billets above the rank of major held by British officers and Arabs in the lower ranks. Although it is unclear why, the TJFF proved far less successful in policing the borders against raids by Saudi and Iraqi tribes than had the Arab Legion, thus in 1930 Captain John Bagot Glubb was made Peake's second-in-command and ordered to raise a Desert Mobile Force to deal with the raiding tribes. Glubb enjoyed great success recruiting Bedouin tribesmen to serve in the new force, which he employed more in the manner of a nomadic warrior band (one with trucks and armored cars) than a conventional Western military force. Glubb's outfit succeeded in once again pacifying Transjordan's borders.<sup>3</sup>

The Arab Legion really grew into a professional military force during the Second World War. The small size of the British Army at the start of the war forced London to scrounge ground forces wherever it could to meet the wide-ranging Axis challenges. The Arab Legion became one of the beneficiaries of Britain's desperation. By the end of the war, the Legion had grown to a force of nearly 8,000 men and officers. The heart of the army were a 3,000-strong mechanized brigade (built on the foundation of Glubb's Desert Mobile Force) and a Desert Patrol Force of 500 men. The Legion was by then commanded by Glubb and officered largely by British regulars, seconded from the British Army. In addition, the Legion had gained some combat experience during the war. Elements of the Legion, including the Desert Mobile Force, participated in the British campaigns to overturn the anti-British Rashid Ali government in Iraq and to conquer Syria from the Vichy French. Other units of the Legion had been posted to garrisons throughout the Middle East to free up British regulars and other Commonwealth troops for combat duties, and the Legion briefly had trained for duty in Egypt in the event the Germans had not been turned back at El Alamein.<sup>4</sup>

### **The War for Israeli Independence, 1948**

During the War of Israeli Independence, the Jordanian military performed well, but not spectacularly. While the Jordanians probably displayed greater effectiveness than any of the other Arab armies, at best they were the equal of the poorly-armed, and hastily-trained Israeli forces. In general, wherever Jordanian and Israeli forces clashed the defender succeeded in hanging on to his positions. With regard to the presence of other factors that might have influenced their effectiveness, the Jordanians suffered little from the effects of politicization at this time. In addition, the Jordanians relied entirely on British doctrine and most of the senior officers were British. Moreover, while their showing in 1948 may have been the best performance of any Arab army in the postwar era, in 1948 the Jordanians also probably had one of the lowest levels of socio-economic development in the entire Arab world.

#### **Politicization**

In 1948, when the Arab Legion marched into Palestine, it was unquestionably the most professional indigenous military in the Middle East. In the first 24 years of its existence, the Jordanian army was responsible for both internal and external security duties, with one mission or another dominating its activities at various times. Regardless of the order of priorities, British training of the Legion always included preparations for the external security mission, and Jordanian soldiers and officers constantly practiced for combat operations against organized militaries. Moreover, during the Second World

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<sup>3</sup> Be'eri, pp. 342-343; El-Edroos, pp. 213-215; Glubb, pp. 99-103; Vatikiotis, pp. 69, 72-73.

<sup>4</sup> Be'eri, p. 343; El-Edroos, pp. 221-236; Glubb, pp. 121-128; Vatikiotis, pp. 73-75.

War, conventional military operations had wholly dominated its activities. Internal security duties and even combat against Arabian tribes had taken a backseat to the need to prepare the Legion for combat with the Iraqi army, the Vichy French, or potentially even the Germans. The Jordanians had been carefully schooled by the British to take part in their defense of the Middle East, and had made limited but still significant contributions to Britain's war effort in the Middle East.<sup>5</sup>

After the war, internal security was still a priority, but it had not significantly affected Jordanian training, thereby avoiding the effects of palace guardism. King Abdullah leaned heavily on the Legion to keep him in power, but a combination of factors kept the Legion focused on conventional military operations. First, the principal threat to Abdullah's rule was not popular revolution but a tribal uprising. Consequently, the Arab Legion served essentially as Abdullah's tribal levies, defeating the armies of his rivals in battle, rather than beating up civilians in street brawls. Second, the British were at least as concerned with the external threats as they were with internal threats. The British relied on the Legion to guard the borders, and later to aid their forces during the Second World War. Even when the Legion was relieved of its external security responsibilities in the late 1920s, Peake made sure that Legion training included a great deal of good, old-fashioned soldiering in the event they were needed either to defeat additional rebellions or foreign raiders.<sup>6</sup>

Praetorianism and commissarism were even less of a consideration. The Arab Legion was completely loyal to the King. Throughout its early history, Abdullah and his British commanders made sure to recruit personnel devoted to the king. Initially, Jordanian soldiers came from the settled populace who favored Abdullah's centralized, stable authority and protected them from the marauding nomadic Bedouin. Later, after many of the Bedouin had been settled and accepted Abdullah's rule they too were encouraged to volunteer for service. For the most part, once the Bedouin had sworn their allegiance to the King, they were unswervingly devoted to him. They enjoyed serving in the Legion and simply had no interest in politics. For his part, Abdullah assiduously cultivated the loyalty of his soldiers and officers, paying generous salaries and offering numerous perquisites, and encouraging the sons of loyal tribesmen to join the Legion, but this was never allowed to interfere with military professionalism. Peake and Glubb controlled all promotions and assignments and they ensured that merit, rather than loyalty, was the primary criterion. Moreover, to the extent they encountered it, the British carefully rooted out any sentiment in the military to intervene or otherwise affect politics. The British officers were not interested in running the government and were not about to let any of their charges make a try.<sup>7</sup>

Consequently, there was little politicization whatsoever in the Jordanian armed forces at the time of the Israeli War of Independence. The pervasive British presence ensured that the military remained focused on conventional military operations. The Bedouins' lack of interest in politics, coupled with Glubb's determination to keep the Legion out of domestic politics, eliminated all but the rumor of praetorianism. While the King did make efforts to ensure the loyalty of his army, the strong ties of the Bedouin to his regime and the British insistence on professionalism meant there was little impact from commissarism on the Jordanian military.

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<sup>5</sup> Be'eri, pp. 342-344; El-Edroos, pp. 199-236; Glubb, pp. 95-128; Vatikiotis, pp. 69-75.

<sup>6</sup> Be'eri, pp. 342-344; Glubb, pp. 73-128; Metz p. 234; Vatikiotis, pp. 6-7.

<sup>7</sup> Uri Bar-Joseph, *The Best of Enemies: Israel and Transjordan in the War of 1948*, (London: Frank Cass and Co. Ltd., 1987), p. 4; Be'eri, pp. 230, 342-344; Glubb, p. 73; Manfred Halpern, "The Army," in Abdulla M. Lutfiyya and Charles W. Churchill eds., *Readings in Arab Middle Eastern Societies and Cultures*, (The Hague: Mouton, 1970), p. 432; Samir Mutawi, *Jordan in the 1967 War*, (Cambridge, UK: Cambridge University Press, 1987), pp. 16, 44; Vatikiotis, pp. 20-21, 27-29.

### **The British Influence**

In 1948, the Arab Legion relied wholly on British military tactics, organization, training, and doctrine. Virtually all of the senior officers in the Jordanian military were British. Glubb himself, the only division commander, both brigade commanders, three of four battalion commanders, the artillery commander and nearly all of the other artillery officers, as well as most of the combat support service officers were all British. Indeed, all but five of the officers of the rank of major or higher were British. These men either were seconded from the British army or else had been discharged from active service and were on contract to the Arab Legion. In addition, several of the small number of Jordanian officers in the legion had been sent to Britain for training. Consequently, Jordan's army was trained and led entirely by British officers or Jordanian officers trained in the British manner.<sup>8</sup>

The British had built the Jordanian Army in their own image--or at least in the cherished image of Britain's vanished colonial armies. Thus just as Britain traditionally relied on a small, long-term service professional army, so too did Jordan. Just as Britain had traditionally relied on a purely volunteer force so too did Jordan. Just as the British emphasized the quality of their manpower rather than its quantity, so too did Jordan. Just as the British stressed the skills of the individual soldier honed in constant practice over many years, so too did Jordan. In Nadav Safran's words, "excellently drilled and ably commanded by British officers it was then [1948] a model of the level of effectiveness that could be achieved with Arab soldiers through careful training and organization."<sup>9</sup>

### **The Jordanian Armed Forces on the Eve of War**

As a result of this British tutelage, the Arab Legion in 1948 was a highly motivated elite body of long-term service professionals. Glubb purposely insisted that the Legion remain all-volunteer so that it could retain its carefully nurtured *esprit de corps*. In 1948, Jordan was one of the most backward regions of the Arab world, and the pay of an enlisted man was almost a princely sum. In addition, the military was still considered to be an extremely prestigious career among the Bedouin tribes. The combination of the Legion's prestige, economic benefits, and *esprit* were reflected in an extremely high retention rate, with many personnel serving for decades and many sons of Legionnaires volunteering. Moreover, by keeping the force small, the Legion had its pick of new recruits and was able to man the ranks largely from Transjordan's minority Bedouin population, who Glubb believed made better and more loyal soldiers. Jordanian soldiers tended to be more motivated and committed to military service, and therefore more willing to endure rigorous discipline and training, than was the case in other colonial armed forces. In addition, the Legion's Bedouins brought a fierce tribal loyalty to the army that promoted strong unit cohesion. The small size of the armed forces also allowed Jordan to continue to provide high quality training for its troops.<sup>10</sup>

Nevertheless, the Legion did have its problems, mostly related to the economic underdevelopment of Transjordan. The general level of education in the country was extremely low and virtually none of the Legionnaires enlisted with even a primary education. Dating back to his time in Iraq prior to joining the Legion, as well as his experiences with the Desert Mobile Force, Glubb favored the Bedouin over the *hadari*, the townsmen. Consequently, the Bedouin comprised at least 50 percent of Legion strength, although they represented no more than 30 percent of the larger Jordanian population. Because of this preference for Bedouin, who were even less likely to have

<sup>8</sup> Bar-Joseph, p. 57; Be'eri, pp. 343-344; Col. Trevor N. Dupuy, *Elusive Victory*, Third Edition--Paperback Edition, (Dubuque, IA: Kendall Hunt, 1992), p. 16; El Edroos, p. 250.

<sup>9</sup> Nadav Safran, *From War to War*, (NY: Pegasus, 1969), p. 233.

<sup>10</sup> Be'eri, p. 342; Anthony Cordesman, *Jordanian Arms and the Middle East Balance*, (Washington, DC: Middle East Institute, 1983), pp. 2-3, 42-52; Arthur R. Day, *East Bank/West Bank*, (NY: Council on Foreign Relations, 1986), p. 81; Glubb, p. 103; Metz, p. 252; and Mutawi, p. 42.



any education than the hadari, literacy was almost non-existent among Legion recruits. Moreover, the British were so dubious as to the quality of Jordanian education that they preferred to have boys enlist at the age of 10 so that they could be educated by the Legion and then inducted into a regiment at a later age. Even fewer Legionnaires came to the military with any sort of technical background. Most had never owned anything more mechanical than an ancient bolt-action rifle. Of course the hadari had had greater exposure to machinery than the Bedouin, and so were heavily represented in the mechanical support branches, but this advantage was entirely relative and few had any actual technical training. In addition, the Legion suffered from friction between the Bedouin and the hadari, and the British were forced to mostly segregate the Bedouin and hadari into separate units to prevent them from feuding.<sup>11</sup>

On the outbreak of war in May 1948, the Arab Legion had 8,000 men, 50 British armored cars, and about 20 artillery pieces. As paltry as this arsenal may seem, it greatly exceeded that of the Israeli Haganah. For example, in the initial battles around Jerusalem, to which the Legion committed nearly half its strength, the heaviest weapons the Israelis possessed were two medium machine guns and two Piat shoulder-fired anti-tank weapons.<sup>12</sup> Glubb formed the Legion into a single divisional command which he entrusted to his deputy, Brigadier Norman Lash. The division had two brigades, each with two battalions of infantry, as well as a number of independent infantry companies. An armored car company was attached to each infantry battalion. The artillery was organized as a separate battalion with three batteries. Finally, a third brigade was organized as a "dummy" formation to fool the Israelis into believing that another brigade was in reserve to deter Tel Aviv from launching a counteroffensive against Transjordan itself. The one really significant material problem the Legion faced was a severe shortage of ammunition. Before the outbreak of fighting, Glubb estimated that he had enough for only one short battle if it involved the entire division.<sup>13</sup>

### **Jordanian Goals and Strategy**

There is a great deal of confusion regarding exactly what King Abdullah hoped to accomplish by invading Palestine in May 1948. It is clear that he did not hope to eradicate the Jewish state altogether, unlike his Syrian, Egyptian, and Iraqi allies. At least initially in 1947 it appears that Abdullah hoped only to occupy the parts of Palestine reserved by the UN commission to the native Palestinians and annex them to his own state. Abdullah began secret negotiations with the Israelis to reach an accommodation that would allow him to divide the territory with the Jews without bloodshed. As time went by, however, Abdullah's ambitions appear to have grown. Abdullah apparently came to desire that the new Jewish state would not be independent at all but would be an autonomous region of Jordan. Barring that, Abdullah hoped to increase the amount of territory under Arab (i.e. Jordanian) control, and in particular he seems to have wanted to control Jerusalem rather than leaving it an international city as specified by the UN partition plan. It might be most accurate to say that Abdullah intended to conquer the west bank territories, and then would take whatever else he could if the opportunity arose.<sup>14</sup>

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<sup>11</sup> Fouad Ajami, *The Arab Predicament*, (Cambridge, UK: Cambridge University Press, 1981), p. 144; Bar-Joseph, pp. 56-57; Be'eri, p. 345; Robert B. Satloff, *Troubles on the East Bank*, (NY: Praeger, 1986), p. 63.

<sup>12</sup> Edgar O'Ballance, *The Arab-Israeli War, 1948*, (London: Faber and Faber Ltd., 1956), pp. 98-99.

<sup>13</sup> Bar-Joseph, pp. 56-57; Dupuy, p. 16; El Edroos, pp. 250-251; Glubb, p. 143; O'Ballance, *The Arab-Israeli War, 1948*, pp. 79-80.

<sup>14</sup> Bar-Joseph, pp. 4-56; Lt. Colonel Natanel Lorch, *The Edge of the Sword: Israel's War of Independence, 1947-1949*, (NY: Putnam and Co., 1961), pp. 142-144. Bar-Joseph's account of Israeli-Jordanian negotiations is highly detailed, but also very confusing. At various points he sets out contradictory accounts of Abdullah's thinking without indicating whether this reflected an evolution in the King's thought, an alternative approach, or simply a negotiating position. In addition, Bar-Joseph appears

Abdullah's intentions were complicated by the limited military forces at his disposal, and by the divided loyalties of his British officers. On the one hand, the Arab Legion simply was not large enough to occupy all of Palestine. It was not even large enough to conquer the various parts assigned to the Arabs by the UN. On the other hand, the Israelis could be expected to fight tooth and nail, and Jordan could not be sure how its ostensible Arab allies would react to such a move.<sup>15</sup> Beyond this, Abdullah was completely dependent on Glubb and the other British officers who took orders not only from him but also from London. The British government made it clear that although they had little love for the Jews, they would not tolerate actions in contravention of the UN settlement. London specifically ordered all of the British officers seconded to the Arab Legion "to abandon their units if these invaded Jewish territory."<sup>16</sup>

Jordanian strategy was a twisted melange attempting to satisfy all of these various positions. Glubb intended to push into the West Bank as quickly as possible and occupy it up to the international border declared by the UN. Of greatest importance, the Legion would shift to the defensive as quickly as possible to avoid unnecessarily provoking the Jews and to secure the Palestinian territories as soon as they had been taken. One final consideration in Glubb's approach was the need to minimize his own casualties. A problem with having a small, long-term service professional army was that casualties were not easily replaced. Consequently, Glubb wanted to avoid bloody battles at all costs, particularly in the streets of Jerusalem, where the training of his troops would be discounted and many might be killed in house-to-house fighting.<sup>17</sup>

### **Course of Operations**

The first Jordanian combat operations actually occurred before the outbreak of war on 14 May 1948. The four Israeli Etzioni settlements outside Jerusalem had been harassing Arab military movements during April 1948. The British considered these actions intolerable and had sent British regulars with tanks backed by a reinforced company of the Arab Legion plus Arab irregulars to attack these settlements in early May. Remarkably, the Jews held but the British decided that they had taught the Jews a lesson and so withdrew their own forces. The Arab Legion company and the Palestinian irregulars remained, however, hoping to receive orders from Amman to resume the attack.<sup>18</sup>

A week passed and on 11 May, the company commander, Abdullah at-Tel, took matters into his own hands and ordered an attack on the settlements. The Jews had about 500 able-bodied personnel (men and women) in the four settlements but had only small arms. While the Arab force was somewhat smaller, it was centered on the Legion company and was backed by a squadron of armored cars as well as considerable artillery and mortar support. In three days of fighting, the Arabs succeeded in isolating the four settlements, and then the Legion company assaulted the main settlement of Kfar Etzion with heavy fire support. The Legion used part of their force to pin the Israeli defenders along their main line of defenses, and then sent another force with the armored cars to outflank the main defensive positions. On 13 May the Legion was able to penetrate the defenses of Kfar Etzion, prompting the other three settlements to surrender.<sup>19</sup>

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predisposed to see a compatibility of interests between Israel and Jordan and consequently downplays events that indicate more aggressive designs on either side.

<sup>15</sup> Lorch, p. 143.

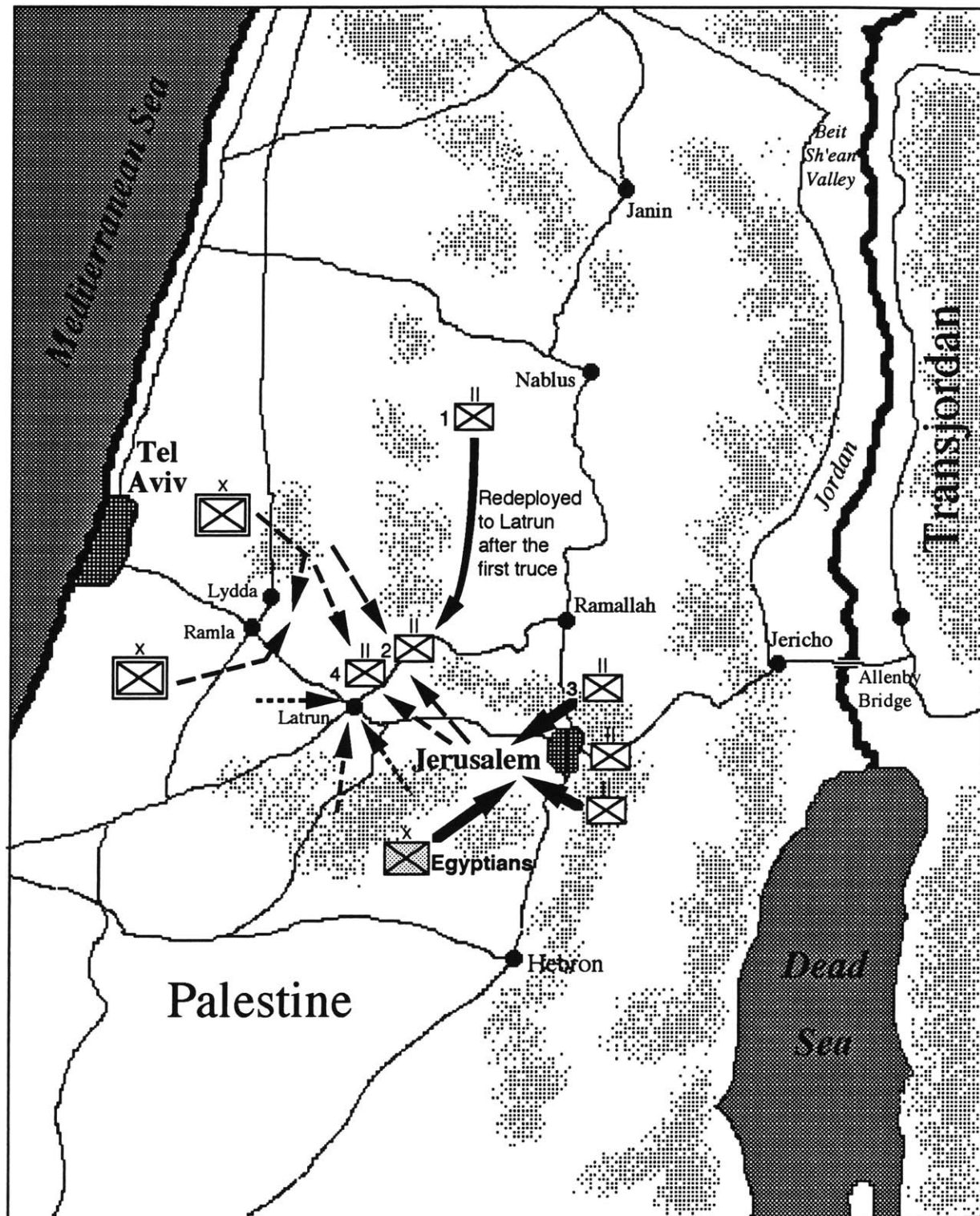
<sup>16</sup> Bar-Joseph, p. 15. See also, Dupuy, p. 29; Glubb, p. 141.

<sup>17</sup> Bar-Joseph, p. 68; El Edroos, p. 251; Glubb, p. 146; Lorch, pp. 142-143.




<sup>18</sup> Bar-Joseph, pp. 61-63; Dupuy, pp. 39-40; Chaim Herzog, *The Arab-Israeli Wars*, (NY: Random House, 1982), p. 42-44; Lorch, pp. 125-127; O'Ballance, *The Arab-Israeli War, 1948*, pp. 65-66.

<sup>19</sup> Bar-Joseph, pp. 61-63; Dupuy, pp. 39-40; Chaim Herzog, *The Arab-Israeli Wars*, (NY: Random House, 1982), p. 42-44; Lorch, pp. 127-129; O'Ballance, *The Arab-Israeli War, 1948*, pp. 65-66.

## Israeli-Jordanian Battles for the West Bank, 1948



-  - Jordanian attacks
-  - Israeli attacks, 24-25 May
-  - Israeli Attacks, 30 May
-  - Israeli Attacks, 9-17 July
-  - Israeli Attacks, 18 July

-  - Jordanian Units
-  - Israeli Units
-  - Other Arab Units

The main body of the Arab Legion crossed over the Jordan river into Palestine on the morning of 14 May 1948. There they linked up with the Jordanian troops already operating south of Jerusalem and quickly occupied the superb defensive terrain of the west bank. Glubb deployed one of his brigades to cover the entire area of Samaria from Jenin to just north of Ramallah, which allowed him to concentrate his other brigade plus a number of independent infantry companies in and around Jerusalem, with the brigade headquarters at Ramallah.<sup>20</sup>

### *The Battle of Jerusalem*

On 17 May, King Abdullah ordered Glubb to attack Jewish Jerusalem in strength. Glubb was reluctant but nonetheless complied, rationalizing it as simply intervention to end the confused fighting that had been raging in the city for the last three days. Glubb detached one of the battalions sent initially to Samaria, the 3rd Infantry, from its parent brigade and ordered it back south to Jerusalem to take part in the attack on the city. The Jordanians launched a coordinated attack from both north and south of Jerusalem with a supporting operation against the Jewish Quarter of the Old City. From the north, Glubb sent the 3rd Infantry Battalion supported by armored cars, artillery and mortar batteries into the Sheikh Jarrah area of northeastern Jerusalem. In the center, several companies along with Palestinian irregulars were to assault the isolated Jewish quarter of the Old City and either overrun it or besiege it. Meanwhile, the Arab Legion forces that had come up from the Etzioni Bloc (now reinforced to about battalion strength), tried to envelop Jerusalem from the south by attacking the settlement of Ramat Rachel on the road to Bethlehem.<sup>21</sup>

The northern thrust met initial success but then was brought to a halt. The Israelis had only 70 members of the Irgun Zvi Leumi, the free-lance militia/terrorist group headed by Menachem Begin, in Sheikh Jarrah and these were easily overpowered by the Legionnaires, thereby cutting off the Jewish garrison on Mt. Scopus. The Legion then attempted to drive westward, from what would later be christened the Mandlebaum Gate, to surround the Old City and cut it off from Jewish territory. Although the Jordanians had a huge advantage in firepower--the defenders had only a pair of light machine-guns and two antitank weapons--they could not break through the Israeli positions. The Legion attacked repeatedly in this sector until the first ceasefire came into effect on 10 June but was never able to break through.<sup>22</sup> After their initial rebuffs in the Mandlebaum Gate area, the Jordanians shifted their effort closer to the Old City. The Legionnaires employed excellent combined arms tactics, moving in teams of infantry and armor supported by mortar fire and occasionally artillery when practicable. Nevertheless they found the going very tough against the under-armed but resourceful Israelis. Eventually, the battle focused on the Israeli-held monastery of Notre Dame de France, which was at the northwest corner of the Old City. In several days of fighting against a handful of Israelis armed with only one anti-tank weapon and a handful of rounds, the Jordanians could not take the monastery. The Jordanians lost several armored cars to Israeli Piat rounds and Molotov cocktails, and their battalion suffered nearly 50 percent casualties. Late on 24 May, Glubb called off the attack fearing additional losses.<sup>23</sup>

The southern thrust against Ramat Rachel was conducted in conjunction with Egyptian units. Elements of the Egyptian invasion force had been dispatched to cut

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<sup>20</sup> Dupuy, pp. 52-53; El-Edroos, pp. 251-253.

<sup>21</sup> Dupuy, pp. 53-54; El-Edroos, pp. 252-254; Herzog, *The Arab-Israeli Wars*, pp. 59-60; Lorch, pp. 177-178.

<sup>22</sup> Bar-Joseph, pp. 71-72; Dupuy, pp. 53-54; El-Edroos, pp. 254-255; Herzog, *The Arab-Israeli Wars*, p. 59; Lorch, pp. 178-179.

<sup>23</sup> Dupuy, pp. 62-63; El-Edroos, pp. 254-256; Herzog, *The Arab-Israeli Wars*, pp. 59-60; Lorch, pp. 179-180.

across the Negev to Beersheba and then push on toward Jerusalem. On 21 May, the two forces launched a combined assault against the small Israeli force defending the village, driving them out by sheer weight of numbers. However, later that day, a company of the Haganah's Etzioni brigade reinforced the Israelis who counterattacked and retook the village. Over the next three days the Arabs attacked the settlement over and over again, recapturing it several times, only to lose it again to Israeli counterattacks during the night. On 24 May reinforcements from Glubb arrived to restart the flagging offensive, and once again the Legionnaires and Egyptians succeeded in taking the Kibbutz, but the Israelis also brought up reinforcements and retook it early on 25 May. In that counterattack the Israelis also succeeded in taking a nearby monastery that dominated the surrounding terrain and which had served as a base for the Arab attacks on Ramat Rachel. At that point the Egyptians and Jordanians called off their attack and dug-in, ending their effort to envelop Jerusalem from the south.<sup>24</sup>

Only in the center, against the Old City, was the Arab Legion able to secure its objectives. The Jewish quarter had the disadvantage of being surrounded by Arab controlled territory and cut off from the Jewish section of the new city. However, it had the advantage of being an ancient Middle Eastern *madinah*, overbuilt with adjoining houses and cut by narrow winding streets that were easy to block or defend. While the British remained in Palestine, the Israelis had smuggled a small amount of supplies and some Haganah and Irgun soldiers into the Old City so that it could withstand the inevitable assaults and likely siege. The Legion attacked the Old City on all sides on 16 May, slowly overpowering the small number of defenders and forcing them to give ground. The Israelis attempted a relief operation during the night of 17/18 May. This counterattack was badly bungled and turned into a frontal assault on Arab Legion positions. The Jordanians proved to be excellent marksmen and inflicted heavy casualties on the Israelis. This attack, however, served as a diversion allowing another Israeli force to surprise and overpower Arab irregulars guarding Mt. Zion after which they breached the Zion Gate and linked up with the Jewish Quarter. Although the Legion was surprised and stunned by the Israeli operation, they quickly regrouped and counterattacked against the Israeli forces holding open the Zion Gate. In a brief, fierce fight during the day, the Jordanians defeated the Israelis and again shut off the Old City from the Jewish sector. For the next ten days the Israelis tried additional attacks to open a corridor to the besieged Jewish quarter but all failed. The Legion devised a very effective tactic of allowing the Israeli soldiers and sappers to penetrate through the Zion gate but then trapping them in a kill sack in the small courtyard on the Arab side of the gate. Meanwhile inside the Old City, the Legion conducted a highly effective clearing operation. Here as well the Jordanians did an excellent job combining armored cars with small infantry teams supported by mortars and direct fire weapons on the city walls. The Legion pushed deeper and deeper into the Jewish quarter, defeated several more Israeli relief efforts, and finally compelled the defenders of the Jewish quarter to surrender on 28 May.<sup>25</sup>

### *The First Battle of Latrun*

In conjunction with his efforts to conquer Jerusalem outright, Glubb also moved to impose a siege on the city by cutting the narrow corridor that ran from the Jewish cities along the coast to Jerusalem in central Palestine. The winding roads that crawled over the central hills to Jerusalem had been the center of constant fighting long before the end of the British mandate, but in late May the Arab Legion made a determined effort to cut these links. Glubb ordered his 2nd Infantry Battalion, then deployed north and west of Jerusalem, to move south and take up positions around Radar hill from which it could

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<sup>24</sup> Bar-Joseph, p. 72; Dupuy, pp. 56, 58, 63; Herzog, *The Arab-Israeli Wars*, pp. 60-61; Lorch, p. 181; O'Ballance, *The Arab-Israeli War*, pp. 93-94.

<sup>25</sup> Dupuy, pp. 61-62; El-Edroos, pp. 254-256; Herzog, *The Arab-Israeli Wars*, pp. 61-62; Lorch, pp. 185-189; O'Ballance, *The Arab-Israeli War, 1948*, pp. 98-104.

interdict Israeli traffic on the Tel Aviv-Jerusalem road. Farther west, the commander of the Legion's 4th Infantry Battalion, Lt. Colonel Habas al-Majali, seized an opportunity to block the Tel Aviv-Jerusalem road farther west at the critical Latrun police fort. The Israelis had initially driven out a small force of Arab irregulars, but then had to draw down the garrison to send reinforcements to deal with the combined Egyptian-Jordanian assault on Ramat Rachel. On his own authority, Majali moved forward and retook the police fort on 20 May, blocking the road to Jerusalem where it could not easily be bypassed.<sup>26</sup>

The Legion's occupation of Latrun placed Israel's hold on Jerusalem in real jeopardy, and Tel Aviv resolved to launch an immediate counterattack to retake the position. The offensive was to be conducted by the newly created 7th Brigade. The 7th was composed of one battalion drawn from the Alexandroni Brigade, which previously had been fighting in the Tulkarm area, a battalion of armored infantry just formed with the first shipment of M-3 halftracks, and another battalion of European immigrants, many literally right off the boat. The plan was for the immigrant battalion and the battalion from the Alexandroni Brigade to attack the western face of the Latrun salient, while a battalion from the Harel Brigade made a feint against the eastern face of the position.<sup>27</sup>

The Latrun police fort was an extremely formidable position, built on a rock promontory that juts out to the southwest from the Samarian hills behind it. Majali had deployed his battalion in the fort itself and dug-in along the promontory with his main strength facing west where the incline was slightly gentler. Thus he was well prepared for the Israeli attack when it came against this flank. The Israeli attack began at midnight 24/25 May with a short bombardment from a handful of old 65mm field guns, however, the assault immediately ran into problems. The Alexandroni battalion arrived at its jump-off position four hours later, so that the initial bombardment served only to alert the Jordanians. The Israeli assault itself was pathetic. The immigrant battalion, consisting of men speaking at least eight different languages and who had had only three days to train together prior to the attack, blundered around in the darkness without doing much damage to the Jordanians. Meanwhile, the Harel attack fooled no one--the Jordanians fully expected the main attack to come up the western slope and none of the Israeli units were able to coordinate their moves. The offensive turned into a frontal assault which the Legions marksmen butchered. The Jordanians turned back the Israeli attack with little effort, inflicting "hundreds" of casualties on the new 7th Brigade.<sup>28</sup>

On May 30 the Israelis attempted another attack against Latrun. Again they attacked with only two battalions, the immigrant battalion of the 7th Brigade and a battalion of the Givati Brigade, which had replaced the badly mauled Alexandroni battalion. While the Israelis had had a week to train the new European immigrants, the Jordanians had had a week to further fortify their positions. This time the Israelis attacked from the south and although the Givati troops were able to take the village of Dayr Ayub at the foot of the Latrun position the attack on the fort itself was again defeated easily. The immigrant battalion attacked in conjunction with a company of (home-made) armored cars, but the two forces were unable to coordinate their actions, allowing the Jordanians to deal first with one threat and then the other. Again the Jordanians were ready for the Israeli frontal attack and again Jordanian marksmanship

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<sup>26</sup> Bar-Joseph, p. 77; Dupuy, p. 63; El-Edroos, pp. 256-257; Herzog, *The Arab-Israeli Wars*, pp. 62-63; Lorch, p. 189.

<sup>27</sup> Dupuy, pp. 63-64; El-Edroos, p. 257; Herzog, *The Arab-Israeli Wars*, pp. 63-65; Lorch, pp. 189-191; O'Ballance, *The Arab-Israeli War, 1948*, p. 106.

<sup>28</sup> Dupuy, pp. 63-64; El-Edroos, p. 257; Herzog, *The Arab-Israeli Wars*, pp. 63-65; Lorch, pp. 189-191; O'Ballance, *The Arab-Israeli War, 1948*, p. 106. El-Edroos claims that the Israelis suffered 700 killed in the first battle of Latrun. Although this number is almost certainly exaggerated, it probably is not that far off.

proved devastating to the Israelis.<sup>29</sup>

The two defeats at Latrun were so decisive that the Israelis decided to build a bypass around Latrun to allow vehicular movement between Tel Aviv and Jerusalem without having to use the main road near Latrun, but they still tried once more to take the position. During the night of 8-9 June, veteran battalions of the Harel and Yiftach brigades were to assault the Latrun position on both sides of the promontory but farther to the northeast, along the "neck" of the promontory rather than its tip. However, the Israelis were unaware that Glubb had reinforced the Latrun position with the 2nd Infantry Battalion as well as additional artillery. While the 4th Battalion continued to hold the fort and its flanks, the 2nd dug-in along both sides of the neck of the position. Thus what the Israelis thought would be a double envelopment to get behind the 4th Battalion's positions, turn both its flanks, and cut it off from Samaria, turned into a pair of frontal assaults against the 2nd Battalion's positions. Both Israeli battalions fought with tremendous determination and succeeded in breaking into the Jordanian lines, but they suffered heavy casualties from Jordanian fire and then were thrown back by aggressive, well-timed counterattacks. The Israelis tried again the next night but one of the battalions got lost in the darkness while the other took heavy casualties from Jordanian fire while climbing the slope and were forced to retreat before they could come to grips with the Legionnaires.<sup>30</sup>

#### *The Israeli Ten Days Offensives and the Second Battle of Latrun*

On June 11 the first ceasefire put an end to combat around Latrun. During this truce, both the Israelis and the Jordanians (and the other Arab armies) reorganized themselves for battle. The Israelis raised and trained new formations while most of the Arab armies reinforced their contingents in Palestine. The Arab Legion, however, suffered a devastating loss when London demanded the return of all British officers seconded to the Arab Legion because Abdullah clearly had violated the UN partition plan through his attacks on Jerusalem and the Jerusalem corridor. Although the British contract officers remained, including Glubb, London's edict suddenly deprived him of both his brigade commanders, three of his four battalion commanders, and many of his artillery officers. Replacements were quickly promoted and assigned the vacant commands--most of these replacements were also British--but it took some time to work out new command and control arrangements.<sup>31</sup>

Nevertheless, the truce gave the Legion a breathing space to regroup, reorganize and improve their defenses. The various independent infantry companies were integrated into two new battalions, the 5th and 6th. The Jordanians continued to fortify their positions around Latrun. They also used the ceasefire to repair and perform overdue maintenance on their vehicles, especially their armored cars. Of particular importance, King Abdullah was able to secure large stocks of arms and ammunition to replenish Glubb's arsenal. Moreover, Glubb realized his troops were spread very thin and so abandoned hopes for anything more than small-scale offensives designed mainly to improve the defensive positions of his forces. With the arrival of the Iraqi Army in northern Samaria, Glubb was able to withdraw the remaining Legion battalion from the Nablus area, which he sent south to Latrun. Consequently, when the first truce ended on 9 July, the Jordanians had three battalions supported by a considerable number of artillery

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<sup>29</sup> Dupuy, p. 65; Herzog, *The Arab-Israeli Wars*, pp. 65-67; Lorch, pp. 192-195; O'Ballance, *The Arab-Israeli War, 1948*, p. 107.

<sup>30</sup> Dupuy, pp. 65-66; El-Edroos, p. 257; Herzog, *The Arab-Israeli Wars*, pp. 67-68; Lorch, pp. 195-198. El Edroos claims that the Israelis eventually lost a total of 1,300 killed in all of the fighting for Latrun. Once again, this number is probably exaggerated, but not grossly so.

<sup>31</sup> Dupuy, pp. 75-77; El-Edroos, p. 257; Glubb, p. 149.



pieces, armored cars, and mortars well-fortified in and around Latrun.<sup>32</sup>

When the first truce expired on 9 July, the Israelis immediately launched a major offensive against the Jordanian forces in Jerusalem and the corridor. In the city itself, the Israelis mounted drives southward to secure their right flank, into the Old City to try to recapture part of that prestigious areas, and northeastward to try to retake the Shaykh Jarrah area and reestablish contact with the garrison on Mount Scopus. The southern Israeli effort was the most successful, driving a small force of Arab irregulars and Legionnaires off of Mt. Herzl thereby somewhat improving their position on that flank. In the center, the Israeli attack against the Old City was clumsy and was stopped quickly with heavy losses by fearsome, accurate fire from Legionnaires deployed along the city walls. Against Shaykh Jarrah, not only did the Legion halt the Israeli assault, they pushed it back and launched a counterattack of their own that succeeded in taking a few minor strips of territory previously held by the Israelis before being stopped.<sup>33</sup>

The heaviest fighting once again came in the Latrun area. The Israelis remained determined to recapture Latrun and reopen the Tel Aviv-Jerusalem road. Their plan was to conduct a division-sized operation to reduce the salient around the towns of Lod and Ramla north of Latrun, which would both reduce a major potential threat to Tel Aviv (Lod and Ramla were only about 10 kilometers from downtown Tel Aviv, indeed, today they are suburbs of the city) and would allow the Haganah to then mount an operation against Latrun from the north and northwest. Glubb had consciously decided to forego the defense of Lod and Ramla to allow for greater concentration around Latrun. Lod and Ramla were too far forward and thus too exposed to Israeli flanking attacks from north or south to be defensible by anything but a very large force. Moreover, the terrain made it difficult for the Israelis to develop a successful conquest of Lod and Ramla into a drive into Samaria itself without first taking Latrun. Thus Latrun was the key position and that was where Glubb concentrated his forces, leaving Lod and Ramla to irregulars of Fawzi al-Kaukji's Arab Liberation Army (ALA) backed only by tiny detachments from the Arab Legion.<sup>34</sup>

The Israeli offensive against Lod and Ramla began during the night of 9 July just as the ceasefire expired. It involved three brigades, including Israel's new 8th Armored Brigade which included a collection of 13 American, British, and French early-model World War II tanks. The Israeli attack was a very well orchestrated double envelopment operation that pushed the Arabs back to the Samaritan hills. The ALA forces put up little resistance and the only time the Israelis were delayed at all was when a small Arab Legion force briefly held up the 8th Armored Brigade at Dayr Tarif before being overwhelmed. By 12 July the Israelis had eliminated the Arab salient and driven a salient of their own into the Jordanian lines north of Latrun. Glubb ordered his forces around Latrun to brace themselves for another Israeli attack.<sup>35</sup>

The Israelis launched their assault on Latrun during the night of 14/15 July. They sent a battalion from the Harel Brigade to make a diversionary attack against the Legion force at Radar hill. Meanwhile, the main body of the Harel Brigade would assault the Latrun salient from the southeast and the Yiftach brigade would assault Latrun from the northwest. The Israelis were unaware of the extent of Jordanian reinforcements, or that Glubb had extended his lines both north and east to guard the shoulders of the salient. Thus the Israelis again believed they were bringing overwhelming force to bear against

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<sup>32</sup> Dupuy, pp. 75-77; El-Edroos, pp. 258-259; Herzog, *The Arab-Israeli Wars*, p. 75; Lorch, pp. 249-251, 289-290.

<sup>33</sup> Dupuy, pp. 79-80; Herzog, *The Arab-Israeli Wars*, p. 84; Lorch, pp. 294-296.

<sup>34</sup> Bar-Joseph, pp. 79-86; Dupuy, pp. 76-78; El-Edroos, p. 260; Glubb, pp. 152-153; Herzog, *The Arab-Israeli Wars*, pp. 79-80, 82; Lorch, pp. 279-281.

<sup>35</sup> Bar-Joseph, pp. 79-86; Dupuy, pp. 76-77; El-Edroos, pp. 260-262; Herzog, *The Arab-Israeli Wars*, pp. 80-82; Lorch, pp. 281-288.



the undefended flanks of the Jordanian positions. Once again, the odds were fairly even (three Jordanian battalions supported by considerable artillery and armored cars against five Israeli battalions with only a handful of guns and armored cars), the Jordanians were entrenched in superb defensive terrain, and the Israelis were conducting what amounted to frontal assaults against the Jordanian lines.<sup>36</sup>

For three days the fighting around Latrun was ferocious. The Israelis were surprised to find the Jordanians waiting for them on the supposedly unoccupied ridges north and east of Latrun, and the first attacks were repulsed with heavy losses to the Israelis. In particular, the Jordanians counterattacked with armored cars and badly mauled several Israeli units that had not expected to face armor and so had few anti-tank weapons. In a few areas, the Jordanians were surprised by Israeli units that stealthily approached their positions and then attacked suddenly out of the darkness. However, the Legionnaires recovered quickly and counterattacked with "unparalleled fury," in the words of Israeli Lt. Colonel Netanel Lorch.<sup>37</sup> The battles were extremely fierce and seemed to see-saw back and forth between the two sides. In at least one case, the Israelis forced the Jordanians to relinquish a key village by outflanking their positions and rolling up their line, while in another instance, the Jordanians launched a surprise counterattack with armored cars and infantry supported by mortars that drove the Israelis out of another important village. By 17 July, the Legion's dogged resistance and vicious counterattacks finally brought the two Israeli pincer thrusts to a halt, although they had come within three kilometers of linking up and cutting off Latrun altogether.<sup>38</sup>

On 18 July the Israelis tried one last attack, this time launching a frontal assault against the main Latrun position itself, in the hope that the previous fighting had so weakened the garrison that it would fall if given one last push. The Israelis pulled together a company from the exhausted Yiftach Brigade with mechanized infantry and a small number of tanks from the 8th Armored Brigade. The Jordanians too were exhausted and apparently much of their strength had been drawn away from Latrun to block the thrusts against its shoulders. Nevertheless, Jordanian artillery laid down a heavy barrage against the Israeli armor as they approached the Legion positions. The Israeli armor still made good progress, however, until a communication problem caused the entire unit to mistakenly retreat. The abrupt departure of his tanks caused the Israeli commander to pull back his infantry for fear they would be slaughtered by the Jordanians without armored support. At that point, the second truce intervened to prevent further combat. Nevertheless, the Israelis had penetrated so deeply into the Jordanian lines that their troops could fire down onto the one remaining road in Jordanian hands that linked Latrun to Samaria. Had there not been a ceasefire, the Israelis almost certainly could have eventually starved Latrun into submission by blocking any resupply columns with their fire.<sup>39</sup>

When the second truce ended in late August, neither Tel Aviv nor Amman had any desire to keep fighting each other. Glubb recognized that the military situation had degenerated into a stalemate with neither side able to make much of an impression on the other's lines and therefore any additional territory he might capture would only come at an exorbitant cost in casualties. In addition, the heavy fighting at Latrun had seriously depleted the Legion's stock of artillery and mortar shells, anti-tank rounds, and hand grenades. Abdullah on the other hand, while no doubt disappointed in not having secured

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<sup>36</sup> Dupuy, p. 78; El-Edroos, p. 262; Herzog, *The Arab-Israeli Wars*, p. 82; Lorch, pp. 288-289; O'Ballance, *The Arab-Israeli War, 1948*, pp. 146-147.

<sup>37</sup> Lorch, p. 290.

<sup>38</sup> Dupuy, p. 78; El-Edroos, pp. 262-263; Glubb, p. 153; Herzog, *The Arab-Israeli Wars*, pp. 82-83; Lorch, pp. 289-292; O'Ballance, *The Arab-Israeli War, 1948*, pp. 146-147,

<sup>39</sup> Dupuy, p. 78; El-Edroos, p. 263; Herzog, *The Arab-Israeli Wars*, p. 83; Lorch, pp. 292-293; ; O'Ballance, *The Arab-Israeli War, 1948*, pp. 147-148.

Jerusalem, had other pressing concerns. In particular, Abdullah wanted to make sure that he secured control of all the West Bank territories. At that point, the Iraqis occupied northern Samaria and the Egyptians were still in much of Judea. Abdullah wanted to focus his efforts on gaining control over these areas rather than continuing pointless attrition battles with the Israelis. As a result of this convergence of interests, fighting gradually halted along the Israeli-Arab Legion lines. Local commanders on both sides continued to encourage sniping and raids against their opponents, but neither military command undertook any large operations. By November, Abdullah had distanced himself from the Arab League and unilaterally opened up truce negotiations with the Israelis. These talks resulted in a full ceasefire on 1 December, ending Jordan's involvement in the war.<sup>40</sup>

### **General Observations on Jordanian Military Effectiveness in the War of Israeli Independence**

The conduct of the Arab Legion against the nascent Israeli army in 1948 was, without doubt, the best performance of any Arab military against any foe since the Second World War. Alone among the Arab armies, the Legion acted and fought like a modern, professional military. Legion units demonstrated remarkable cohesiveness, sticking together and clinging to their positions even in tremendously difficult situations such as the Second Battle of Latrun. The Legionnaires themselves regularly displayed a high level of personal courage, and there are any number of stories from both the Israeli and Jordanian sides to attest to this.<sup>41</sup> The Jordanians demonstrated a good grasp of combined arms operations, regularly integrating their infantry, armored cars, and artillery better than the Israelis. The Legion's marksmanship was very high and their counterattacks were usually well-timed and aggressive. Jordanian units covered their flanks well and were not paralyzed when the Israelis did succeed in turning their flank. The Legion patrolled constantly, often preventing the Israelis from surprising them and even surprised the Israelis on a number of occasions. On several occasions Jordanian junior officers showed real initiative, seizing fleeting opportunities--such as attacking the Latrun police fort when the Israelis had left it dangerously undermanned--that later proved to be critical to their war effort. Finally, Legion officers regularly employed operational maneuver to gain an advantage in combat, although at the tactical level, many Jordanian attacks were simple frontal assaults.

Nevertheless, at least two qualifiers must be kept in mind when considering Jordanian performance during the War of Israeli Independence. First, while the Jordanians unquestionably fought better than any of the other Arab armies, and in some ways they fought as well as the Israelis, their performance did not exactly rank as one of the great campaigns of military history. In particular, the Jordanians did not face a very capable adversary and they had several important advantages in their favor. Myths of Israeli invincibility aside, the Haganah of 1948 was a very mediocre force. Its unit capabilities were extremely uneven with some brigades performing well and others giving a rather poor account of themselves. The Israelis were inadequately armed and trained, they had problems with political infighting, they had all kinds of problems with different languages as well as the incompatibility of their hodge podge of weaponry. Some Haganah units paid too little attention to reconnaissance and so were surprised by Jordanian actions that might easily have been discovered. The Jordanians also had the considerable advantage of defending the superb terrain of Judea and Samaria while the Israelis were forced to mount most of their operations from the coastal plain. Finally, the Israelis also had to fight five other Arab armies which prevented them from concentrating against Jordan.

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<sup>40</sup> Bar-Joseph, 101-133; Dupuy, 99-100; El-Edroos, pp. 269-270; Lorch, pp. 379-383, 401-403.

<sup>41</sup> As only one example, see the account in Herzog, *The Arab-Israeli Wars*, p. 83.

Despite all of these advantages, the Jordanians only succeeded in fighting the Israelis to a draw. The Jordanians consistently were able to defeat Israeli attacks against their prepared defensive positions. Most of the successful Israeli offensives in the Jerusalem area (such as at Lydda and Ramla and Mt. Zion) were conducted against very small Arab Legion forces, while larger Jordanian units in the Old City and Latrun held their ground against numerous determined Israeli assaults. However, in virtually all of these cases, the Israeli attacks were clumsy frontal assaults that played right into Jordanian hands. Although the Legion defeated most Israeli attacks, they fared no better in their own offensive operations. The only significant gains the Jordanians were able to make against Israeli resistance were the conquests of the Etzioni bloc, the Jewish Quarter of the Old City, and the Shaykh Jarrah area. All of these successes came in the first weeks of the war, before the first truce, and all were extremely modest achievements. In none of these battles did the Jordanians face a large, well-armed and adequately trained force. For example, in Shaykh Jarrah, a Legion infantry battalion backed by artillery and armored cars defeated 70 infantrymen from the Irgun. Even with the advantage of urban terrain on the Israeli side, this was a complete mismatch and the Legion's victory cannot be seen as a sign of great prowess on the part of the Jordanians. Conversely, the moment that the Jordanians ran into either better-trained or larger Israeli units--such as in the Mandlebaum gate area and at Notre Dame--their attacks went nowhere.

The second important qualifier that must be attached to Jordanian performance in this conflict is the contribution of the Legion's British officers. There is a consensus among experts on the Jordanian military and the 1948 war that it was the British influence/presence that was the single most important element of Jordanian military effectiveness. For instance, Brigadier S. A. El Edroos, an unabashed admirer of the Jordanian military, remarked that, "The credit for the excellence of the Arab Legion's performance during the war of 1948 and later, during the border wars of 1951-1956, must in all fairness be given to Glubb Pasha and the contingent of British officers who served with the Arab Legion from its formation in 1921 to the exodus of 1956."<sup>42</sup> Col. Trevor Dupuy has similarly noted that the principal source of Jordanian military effectiveness was "decades of British leadership and military tradition."<sup>43</sup>

There is a great deal of validity to this position. Most of the successes the Jordanians enjoyed and most of the competent military practices they demonstrated are attributable to their officer corps, which was heavily British while even many Jordanian officers had been schooled and trained by the British. Aggressive counterattacking, maneuvering for advantage, adaptation and opportunistic initiative were all traits exercised by the (British-dominated) officer corps. Likewise, the high-level of individual soldiering skills found in the Legion, such as their excellent marksmanship, is directly attributable to the British emphasis on long-term service professionals who thereby benefited from iron discipline and lengthy training. The very competent strategic direction of the war, itself another element of Jordan's praiseworthy showing in this conflict, was entirely the product of British officering. It is extremely difficult to discount the pervasive British influence as a source of the various skills displayed by the Arab Legion in 1948.

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<sup>42</sup> El-Edroos, p. 312.

<sup>43</sup> Dupuy, p. 627. For British and Israeli authors with concurring views, see for example General Uzi Narkiss, *The Liberation of Jerusalem: The Battle of 1967*, (London: Valentin Mitchell, 1987), p. 52; Safran, p. 233; Brigadier Peter Young, *The Israeli Campaign, 1967*, (London: William Kimber, 1967), pp. 50-51.

### **Jordanian-Israeli Clashes 1949-1966**

Considerable change followed in the wake of the Israeli War of Independence. The Jordanians dismissed their British officers, expanded the Legion, and attempted to modernize the military so as to better compete with Israel. The decline of British influence was also accompanied by a slight rise in politicization after a wave of coups and assassination attempts against the Jordanian monarchy. There was frequent small-scale combat between Israel and Jordan during this period as Amman permitted (and to some extent armed and encouraged) Palestinian *fedayeen* to conduct raids against Israel. Tel Aviv adopted a policy of disproportionate reprisals against the countries from whose territory the raids were originating, which led inevitably to clashes between the Israel Defense Forces and the Arab Legion. The largest of these battles were at Qalqilyah in 1956 and as-Samawah in 1966. Jordanian performance in these two battles demonstrated a decline in capabilities paralleling the diminution of British influence, while Israeli effectiveness increased precipitously, foreshadowing Israel's lopsided victory in the Six-Day War of 1967.

#### **Expansion and Modernization**

Almost immediately after the conclusion of the war in Palestine, Amman inaugurated plans to greatly enhance its military capabilities both quantitatively and qualitatively. While, Abdullah and his British military chiefs had generally been pleased with the performance of the Arab Legion against the Israelis, they recognized that it was too small a force to adequately defend the new nation against the variety of threats that now confronted it. This expansion, however, did not imply a move to a mass army. The British officers in particular were completely opposed to diluting the caliber of manpower by adopting large-scale conscription. Instead, they would retain the same long terms of service and rigorous discipline and training, and simply accept more volunteers. In addition, as another important way of increasing the overall combat power at its disposal, Amman began pursuing newer and heavier weapons, particularly tanks and combat aircraft to improve the firepower and mobility of the Legion.<sup>44</sup>

The war in Palestine had also pointed out a number of other shortcomings which Jordan attempted to address in the years thereafter. The Legion was very weak in its combat support and combat service support branches. Prior to 1948, the Legion had simply relied on the British army in the Middle East to take care of its various logistical and support functions, in addition to providing air cover, signals, and combat engineer units as needed. When the British pulled out of Palestine in 1948 they took these functions with them and the Legion had had to improvise in the war with Israel. In particular, the Legion had suffered from a severe dearth of technically competent personnel to man signals, artillery, combat engineering, logistics, and maintenance and repair billets.

Across the board, the Jordanians and their British commanders made a major effort to remedy these problems and to expand and modernize the Arab Legion. In 1950, Amman established an officer cadet training school, and later training programs for technical and logistical personnel, a Royal Military College and a Command Staff College. In 1951, King Abdullah created a Royal Jordanian Air Force with a small number of older British aircraft. Shortly thereafter, Glubb began laying plans for the establishment of a true armored battalion. In addition, the Arab Legion began accepting large numbers of new volunteers. Throughout the 1950s and 1960s the Legion remained an extremely popular career. Its prestige was enormous and its economic benefits excellent. Indeed, by the mid-1960s, there was a long waiting list for potential recruits

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<sup>44</sup> Richard A. Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, CT: Greenwood Press, 1983), p. 29;

and many potential applicants resorted to bribery simply to be able to serve as enlisted men.<sup>45</sup> Arab Legion strength rose from 12,000 men in 9 infantry battalions and several independent infantry companies in 1949, to 55,000 men in nine infantry brigades, two armored brigades and five independent tank and infantry battalions in 1967.<sup>46</sup>

In 1951, King Talal created the Palestinian National Guard. The establishment of the state of Israel had resulted in a massive influx of (mostly involuntary) Palestinian refugees from the Israeli held territory into Jordan. Amman created the National Guard as a paramilitary force to patrol the borders with Israel and prevent Israeli reprisal raids against Jordan's west bank villages. The new border with Israel was over 400 miles long and the tiny Arab Legion simply lacked the manpower to patrol its entire length. Amman was wary of the Palestinian refugees, who lacked the ties of the Bedouin tribes to the Hashimite monarchy, thus they were reluctant to accept large numbers into the Legion. The National Guard was therefore a compromise, allowing Palestinian men to arm themselves and defend their own villages against the Israelis while keeping them out of the Jordanian military itself. By 1965, the National Guard had grown to approximately 30,000 troops with rudimentary military training and equipped mostly with small arms and light crew-served weapons.<sup>47</sup>

This tremendous range of new programs produced some unintended problems. First, as part of the effort to improve Jordan's ability to operate and maintain technical equipment, Glubb encouraged the recruitment of more technically qualified personnel, including many who simply had some exposure to modern machinery and electronics. However, the segments of the population that most possessed these traits were the hadaris, and particularly the new Palestinian refugees. The Palestinians mostly came from the big coastal towns and so had had the most contact with cars, telephones, and other mundane technology. They also possessed the largest number of young men trained in technical fields such as engineering and the physical sciences. The Hashimites had developed a very strong relationship with their Bedouin population during the 1930s and 1940s and now felt less comfortable relying on the Jordanian hadaris, while they did not trust the Palestinians at all. Most of the Palestinians looked down on the Hashimites and their Bedouin supporters as unsophisticated "bumpkins," what's more, they were intent on reconquering their homeland, a goal for which the Jordanian monarchy was ambivalent at best. Thus Glubb's efforts to recruit technically skilled Palestinians and hadaris was regarded with real misgiving in Amman, and they were strictly segregated within the military.<sup>48</sup>

The second problem the Jordanians encountered regarded the manning of their new officer billets. The dramatic expansion of the Legion demanded a corresponding increase in the size of the Jordanian officer corps. Amman's response was to secure large numbers of additional British officers seconded from the British military. This considerable influx further improved the professionalism and effectiveness of the Jordanian military, and proved crucial in training the hordes of new recruits being brought in to fill out the expanded force structure. Simply put, there existed no readily available pool of trained officers in Jordan that could have been drawn upon to provide adequate training to such a large number of new personnel inducted in such a short amount of time. Had the Jordanians not been able to obtain the services of these British officers there is no question that their expansion program would have been far less successful and might have failed altogether, producing a larger, but far less capable force

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<sup>45</sup> Richard T. Antoun, *Arab Village: A Social Structural Study of a Transjordanian Peasant Community*, (Bloomington, Ind: Indiana University Press, 1972), p. 33; El-Edroos, pp. 281, 310.

<sup>46</sup> Be'eri, p. 342; Dupuy, pp. 282-284; El-Edroos, p. 281.

<sup>47</sup> El-Edroos, pp. 287-288, 317; Edgar O'Ballance, *Arab Guerrilla Power*, (Hamden, CT: Archon Books, 1973), p. 25.

<sup>48</sup> Day, p. 79; El-Edroos, p. 281.

than actually proved to be the case. However, the large influx of British officers also created resentment among the Jordanian junior officers who believed that they should have been given first preference for the new command assignments opening up as a result of the expansion. Indeed, by 1955 British officers accounted for over half of all the officer billets in the Arab Legion, a higher percentage than at any previous time.<sup>49</sup>

### **The End of the British Presence**

In March 1956 the new Jordanian King, Hussein ibn Talal, grandson of Abdullah, dismissed Glubb and the other British officers from the Arab Legion, and officially renamed the force the Jordan Arab Army (*al-Jaysh al-Arabiyyah al-Urduniyyah*).<sup>50</sup> The young king and Glubb had some differences regarding the future course of the Jordanian armed forces, but this was not a major cause of the rupture. Instead, Arab nationalism was probably the most important motivating force. In the mid-1950s Nasser was the hero of the Arab streets while the British, the old imperial power, were considered the great enemy. Many young Jordanians saw the continuing British presence in the Jordanian military as a lingering vestige of British control over the country. At best, the British officers had divided loyalties, while many Jordanians could point with some justification to their conduct in the war with Israel as proof that, first and foremost, their allegiance was to London. Finally, many ambitious young Jordanian officers saw the British as a major obstacle to their future advancement and they agitated for Glubb's dismissal under the guise of nationalism, but really for their own material benefit.<sup>51</sup>

The sudden departure of the British officers from the Legion created considerable "headroom" for the aspiring Jordanian officers, but it also ushered in immediate problems. First, the Jordanians found that few among their officer candidates were really qualified for tactical command assignments. Amman was able to find enough competent officers to fill the relatively small number of senior slots opened up by the British exodus, but ran into serious difficulties at lower levels. As Brigadier Peter Young, a highly decorated British commando and the commander of the Jordanian 9th Infantry Battalion until 1956, succinctly noted, "there was a distinct shortage of potential battalion and company commanders."<sup>52</sup> As a result, the Jordanians simply had to make do with what was available. Second, the loss of the British also threatened the Legion's former aloofness from politics. As long as Glubb and his compatriots were in charge of the armed forces, there was no question that the Legion would remain apolitical: the British really had no interest in meddling in Jordan's domestic problems, nor did any of the British aspire to political power in Jordan. Consequently, the King could be confident that his army would not turn on him and would devote itself completely to the security issues of the country. Once the British were gone--and ousted largely as a result of pressure from ambitious and ideologically motivated military officers--Amman no longer could consider the armed forces a neutral instrument of the state.

### **Politicization**

Thus the loss of the British led to a degree of politicization of the Jordanian military. For King Hussein, bowing to the pressure of his ambitious, nationalist (mostly Nasserist) officers was like opening Pandora's box. Almost immediately afterward he faced a series of attempted coups and assassinations that lasted several years. In 1957

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<sup>49</sup> El Edroos, p. 281; Glubb, pp. 174-183; James Lunt, *Hussein of Jordan*, (London: McMillan, 1989), p. 12.

<sup>50</sup> To this day, the Jordanian army is still regularly referred to as the Arab Legion informally in English conversation and literature.

<sup>51</sup> Dupuy, p. 283; El-Edroos, pp. 311-316; Glubb, pp. 174-183; Eric Hammel, *Six Days in June*, (NY: Scribner's, 1992), p. 286.

<sup>52</sup> Young, p. 52.

Jordan's Chief of the General Staff, Major General 'Ali Abu Nuwar attempted a coup against King Hussein that was only defeated when an armored car battalion of loyal Bedouin faced down a key hadari infantry unit supporting Abu Nuwar. In 1958, two Syrian MiGs tried to shoot down a small plane piloted by the King as he crossed Syrian airspace on his way back to Jordan. Syria instigated another failed army coup in 1959 and backed the assassination of Jordan's hardline Prime Minister Hazzah Pasha al-Majali in 1960.<sup>53</sup>

That same year, after the third attempted coup in three years the King moved to gain control over the military. He dismissed ideologically motivated officers, and concentrated the command positions in the hands of Bedouin officers with ties to himself and his family. He abolished the division organization in the Legion for fear that the command of the one Jordanian division was too powerful a position and a potential springboard for coup-plotters. Meanwhile, King Hussein expanded the number of senior staff positions and filled them with family members and loyal senior tribesmen to surround himself with high-ranking men whom he could count on in a crisis. As a result, the King's problems with the Legion literally vanished and its loyalty has been essentially unquestioned ever since. Indeed, the measure of this loyalty is that Syria and Egypt continued to try to bring down the Hashimite monarchy but were forced to turn to other, much less dangerous, methods. For example, in 1963, Egypt, Syria and Iraq tried to stir up a popular revolt against the King but the army remained loyal and even opened fire on a crowd of demonstrators in Amman, killing 30 people. Later, after the establishment of the Palestine Liberation Organization (PLO) in 1964, Egypt and Syria tried to use the Palestinian fedayeen against King Hussein, encouraging clashes between the PLO and army units. In 1966, the new Ba'thist regime in Syria helped the PLO to engineer a coup attempt against the King that once again failed because the army remained loyal.<sup>54</sup>

The growing number of hadaris and Palestinians being inducted into the Legion was another spur to politicization. Amman was suspicious of its Palestinian/hadari population (these terms were almost synonymous by 1967) even before the British departed. Grudgingly, the King recognized the need for additional qualified recruits to fill out the ranks of the expanding Legion, and in particular for technically skilled personnel which only could come from the hadari population. Nevertheless, Amman went to great lengths to minimize the potential threat to the regime from the hadaris in the military. "West Bankers" were relegated to the technical arms and services--engineering, supply and transport, maintenance and repair, medical services, and signals--and to four of the infantry brigades. The other five infantry brigades, the two armored brigades, as well as the independent armor battalions, were kept strictly Bedouin. Naturally, the four "Palestinian" brigades were deployed to the West Bank while both armored brigades and 2-4 of the "Bedouin" infantry brigades were kept on the East Bank, between the West Banker units and the capital. Amman kept a close watch on its handful of Palestinian officers and few were allowed to rise even as high as battalion commander--and then usually only in support units. Command in the combat units was generally reserved for Bedouin officers. Eventually, the King's problems with the Palestinian fedayeen grew so difficult that in 1965 he disbanded the National Guard because it was a large body of armed Palestinians that could turn on his regime.<sup>55</sup>

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<sup>53</sup> Be'eri, pp. 230-233; Anthony Cordesman, *Jordanian Arms and the Middle East Military Balance*, (Washington, DC: Middle East Institute, 1983), p. 38; El Edroos, pp. 317-319, 321-322, 332-333; Mutawi, p. 44.

<sup>54</sup> Be'eri, pp. 230-233; Anthony Cordesman, *Jordanian Arms*, p. 38; El Edroos, pp. 317-319, 321-322, 332-333; Mutawi, pp. 16, 44.

<sup>55</sup> Be'eri, p. 345; Hammel, p. 286; Metz, p. 234; Edgar O'Ballance, *The Third Arab-Israeli War*, (Hamden, CT: Archon Books, 1972), p.172; O'Ballance, *Arab Guerrilla Power*, p. 25; Satloff, p. 63; Vatikiotis, pp. 26-29.

Nevertheless, the politicization of the Jordanian military should not be overstated. While a considerable departure from past practices under the British, the degree of commissarism inflicted on the Arab Legion was negligible compared to the practices of Syria, Iraq before 1982 and Egypt until 1967. In particular, merit remained the primary criteria for advancement among lower ranks and only the highest command positions were selected by loyalty *instead* of ability. However, the most important factor that allowed the King to limit the degree of commissarist politicization he inflicted on his military was the presence of the loyal Bedouin tribesmen. The Bedouin tribes comprised roughly one-third of Jordan's population, and their loyalty to the Hashimites was demonstrated repeatedly whenever it was put to the test. Basically, the Bedouin saw the King as their tribal Shaykh and they would fight all challengers to his reign. This devotion gave the King tremendous latitude in recruitment and promotions. For the most part, the King was able to assume that any Bedouin soldier or officer was likely to be loyal to his regime and thus only at the highest levels of command, where personnel were assigned positions of great power, did the regime have to scrutinize a candidate's record to determine his ultimate commitment to the Hashimite monarchy. Thus while it was true that the King generally limited the command of his combat formations to only one-third of the population--and undoubtedly overlooked many very capable Palestinian candidates--given the small size and professional nature of his army, this pool was more than adequate to find competent personnel who could be trusted with tactical command positions.<sup>56</sup>

### Combat Operations

Combat never fully ceased along the Israeli-Jordanian border even after the December 1948 ceasefire. Palestinians, Jordanians, and Israelis found reasons to snipe at each other across the ceasefire lines, raid each others' villages, and kidnap each others' soldiers. The increasing frequency and growing intensity of these exchanges caused Amman to create the Palestinian National Guard to provide additional manpower to guard the length of Jordan's lengthy borders with Israel. Israeli forces performed extremely poorly in these operations at first, prompting Tel Aviv to set up a special elite force, called Unit 101, under the leadership of Major Ariel Sharon, specifically for cross-border raids. In 1954, the Israelis expanded this elite force by merging Unit 101 with its paratrooper battalion to form the 202nd Paratroop Brigade, again under Sharon's leadership. Sharon's troops dramatically altered the balance along the Israeli-Jordanian border: Sharon proved to be a brilliant tactician, his men were superb fighters, and they regularly defeated much larger Jordanian and Palestinian forces. This string of defeats, and the increasing ferocity of Sharon's raids, forced the Jordanians to beef up the presence of regular Army units on the West Bank, escalating the scale of combat even further. The largest and most important clash between Sharon's force and the Arab Legion was at the West Bank village of Qalqilyah in October 1956.<sup>57</sup>

### *The Battle of Qalqilyah*

In September and October 1956 a group of Palestinian fedayeen conducted a series of attacks on Israel from the Qalqilyah area that left nine Israeli civilians dead. Tel Aviv decided to mount a reprisal raid by Sharon's 202nd Parachute Brigade against the Jordanian military headquarters at Qalqilyah for sanctioning, or at least not preventing, the operations of this Palestinian group. Qalqilyah is about twenty kilometers northeast of Tel Aviv, at the western tip of a salient that sticks out into Israel from the West Bank

<sup>56</sup> Dupuy, p. 378; Gabriel, pp. 29-35; Mutawi, p. 44; Anthony Pascal, Michael Kennedy, Steven Rosen, *Men and Arms in the Middle East: The Human Factor in Military Modernization*, RAND R-2460-NA, Santa Monica, June 1979, p. 41; Amos Perlmutter, *Egypt: The Praetorian State*, (New Brunswick: Transaction Books, 1974), pp. 56-57.

<sup>57</sup> El-Edros, pp. 287-289, 292-295; Glubb, pp. 161-169, 171-173, 176.



territories creating the narrowest point of Israel's narrow waist. Qalqilyah was defended by elements of the Jordanian 9th Infantry Battalion, commanded until March of that year by the famed British Commando Peter Young. At least another company of the battalion was in reserve at Azzun, several miles to the east of the town, eager to counterattack an Israeli reprisal raid.<sup>58</sup>

On 10 October, Sharon led elements of his 202nd Parachute Brigade in a raid on Qalqilyah. Israel's political leadership placed several unusual constraints on Sharon's operation so as not to jeopardize the ongoing negotiations with Britain and France for a combined military campaign against Egypt. Sharon's plan had been to deploy a blocking force along the Azzun road; another force would seize the Zuffin hill which overlooked the Azzun road; a third force would clear the Arab Legion strongpoints south of Qalqilyah; while still another force would actually seize and demolish the military headquarters. However, Tel Aviv would not allow Sharon either to take Zuffin hill or to attack the Legion strongpoints south of the town because they feared that it would make the operation seem too large.<sup>59</sup>

As a result of these changes, the raid turned into a pitched battle. When Sharon's units drove eastward into Qalqilyah, the Arab Legion company in the strongpoint south of the town opened fire on them. Although the Jordanians did not get out of their positions and counterattack the Israelis to prevent them from reaching the military headquarters, their fire was accurate and as it came at the Israelis from the flank, it slowed down the Israeli operation. The reserve elements of the 9th Battalion came racing down the Azzun-Qalqilyah road as soon as they received radio reports of the Israeli attack. They blundered into the Israeli blocking force and were thrown back with heavy losses. However, the Jordanian force was considerably larger than the Israeli blocking force, prompting the Israeli commander to fall back to another ambush position. The Jordanians regrouped and attacked down the road again, and again were surprised and mauled in the Israeli ambush. Again the Jordanians fell back in disarray, regrouped, attacked again and were again ambushed. After this third bloody nose, the Jordanian commander deployed a part of his force to move north of the road into a flanking position. It is unclear whether the Jordanian commander intended to mount a flanking attack on the Israeli blocking force or had given up and was simply deploying to prevent the Israelis from driving farther east into Jordan.

This move turned the tide of battle suddenly turned in favor of the Legion. By that point the Israelis had completed their operation in Qalqilyah and the blocking force was ordered to withdraw to the north, to the Israeli Kibbutz of Eyal, but this movement led them to run into the Jordanian flanking position. The Jordanians surprised the Israelis and threw them back with a fair number of casualties. The Jordanian commander realized he had the small Israeli blocking unit in a bad position, and threw all of his forces against them. He attacked with most of his units against the pinned-down Israelis but sent part of his force west to take Zuffin hill to cut their escape route west back to Qalqilyah. The Israelis did try to escape westward and were caught in an ambush by the Legionnaires on Zuffin hill. Sharon finally called in artillery and sent in a small force of APCs he had been holding in reserve which cut their way through the Jordanian lines and extracted the trapped unit only after losing one of the APCs to Jordanian anti-tank fire. All told the Israelis suffered 18 dead and 60 wounded, while the Jordanians suffered between 120 and 300 casualties.<sup>60</sup>

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<sup>58</sup> El-Edroos, p. 300; Ariel Sharon with David Chanoff, *Warrior: The Autobiography of Ariel Sharon*, (NY: Simon and Schuster, 1989), pp. 136-137.

<sup>59</sup> Sharon, pp. 137-138.

<sup>60</sup> El-Edroos, p. 300; Sharon, pp. 138-140.

### *The Battle of As Samu*

The constant raiding continued through the 1950s and into the 1960s. The Palestinian attacks were a constant frustration for Israel, and the Israeli retaliatory raids were a constant embarrassment for Jordan. Indeed, in 1964 with the formation of the PLO, Palestinian attacks on Israel actually increased and the Israeli responses escalated as well. By the mid-1960s, Amman was determined to try to catch and destroy the Israeli raiding forces and deployed significant ground forces to the West Bank for this purpose. Eventually, the Jordanians were able to bring Israeli forces to battle at the village of as-Samu, south of Hebron in Judea.<sup>61</sup>

On 12 November 1966, a truck carrying an Israeli patrol hit a mine near the Jordanian border, killing three and wounding six others. The next day before dawn, the Israelis launched a major reprisal raid against the nearby Jordanian town of as-Samu.<sup>62</sup> The Israelis sent a parachute battalion in halftracks along with a company of light tanks (probably AMX-13s) to demolish the Jordanian police station there and key buildings of the Jordanian government and the Palestinian fedayeen.<sup>63</sup> Part of the force, a paratrooper company and a light tank platoon, set up a blocking position along the main road from Hebron where the Legion's 29th "Hittin" Infantry Brigade was deployed. When the Jordanians learned of the raid, they dispatched nearly a battalion of the Hittin brigade to confront the Israelis.

The Jordanian counterattack turned into a fiasco, however. First, reports coming back from As Samu were hopelessly confused and led the Brigade commander to believe that the Israeli force was not at as-Samu, but closer to the border, near the (Israeli) village of Yattir. Next, the Jordanian battalion commander failed to scout his route of advance. As a result of these two problems, the entire Jordanian battalion mounted in trucks blundered into the Israeli ambush outside of as-Samu along the road to Hebron. The Israelis coolly destroyed the first 15 trucks of the Jordanian column before the Jordanians could escape. The Legionnaires regrouped and launched an attack on the small Israeli blocking force in conjunction with an airstrike by four RJAF Hawker Hunters. Despite their numerical advantage, the Jordanians failed to mount a proper anti-tank effort, and failed to try to outflank the Israeli position. Instead, they seem to have conducted a poorly-coordinated frontal attack that failed quickly. Nevertheless, the Israelis were not interested in pursuing the battered Legion battalion, allowing them to retreat without further loss. In all, the Jordanians suffered 21 killed and 37 wounded while the Israelis lost one killed (the battalion commander) and ten wounded.<sup>64</sup>

Meanwhile, Tel Aviv had dispatched a pair of Israeli Mirages which intercepted the Jordanian Hunters. Two of the Jordanian Hunters probably fled when the Mirages

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<sup>61</sup> Hammel, p. 19; Mutawi, pp. 76-79.

<sup>62</sup> In fact, Jordan was merely a poor surrogate for Syria. The Syrians had been harrassing Israeli settlers in the Huleh valley from their artillery positions on the Golan heights for years and these bombardments grew very heavy in the last quarter of 1966. However, because of the depth and strength of Syrian fortifications on the Golan, because any worthwhile target in Syria was at least 20-30 kilometers away from Israel via the Golan, and because Syria had recently signed a military pact with Egypt, the Israelis felt they could not retaliate against Syria. The Israelis wanted desperately to avoid a war with Syria, and wanted to avoid a simultaneous war with Egypt and Syria even more. The Golan as a well-fortified buffer made only large-scale operations practical and Tel Aviv feared that a major operation would trigger a war. Consequently, the Israelis chose to go after Jordan instead. Paradoxically, the Israeli decision to retaliate against Jordan when its real target was Syria was a major factor prompting King Hussein to cast his lot with Egypt and Syria before the Six-Day war. See El Edroos, Hammel, pp. 16-19; Mutawi, pp. 74-78.

<sup>63</sup> The Israelis claim to have only demolished the 40 targeted buildings, however, Jordanian sources claim that the Israelis went on to dynamite another 80-100 buildings and homes. Hammel, pp. 20-21.

<sup>64</sup> El Edroos, p. 334; Hammel, pp. 19-21; Hussein of Jordan, *My "War" with Israel*, As told to and with additional material by Vick Vance and Pierre Lauer, Tranlstaed by June P. Wilson and Walter B. Michaels, (NY: William Morrow and Co., 1969), pp. 26-27; Mutawi, pp. 76-79.

arrived on the scene while the other two engaged the two Israeli Mirages. One of the Jordanian pilots quickly got on the tail of one of the Mirages but just as quickly the Israeli reversed the situation and got in behind the Hunter. For eight minutes the Jordanian pilot tried to shake the Mirage before finally being shot down.<sup>65</sup> This was the longest single dogfight in Israeli Air Force (IAF) history, and was twice as long as most previous Israeli air battles. Afterward, the Israelis asserted that the Jordanian pilots had proven far more capable adversaries than either the Egyptians or the Syrians.<sup>66</sup>

### **General Observations on Jordanian Military Effectiveness in the Battles of Qalqilyah and As-Samu**

It would be unwise to draw too many lessons from two small battles fought ten years apart were it not for the fact that they establish a pattern that was later borne out during the Six-Day War. Essentially, the Jordanians fought well, albeit not brilliantly, at Qalqilyah. They responded quickly to the Israeli attack, the company in place took the Israelis under accurate long-range fire while the reserve force rushed forward for a counterattack. The company to the south of the town failed to counterattack into the exposed Israeli flank, or to otherwise get out of their positions and engage the Israelis to prevent them from carrying out their mission. This shows a failure on the part of the local commander to take the initiative or to improvise a response to the Israeli move. Similarly, the commander of the reserve force (probably the battalion commander) failed to scout his route of advance and so fell prey to an Israeli ambush. Not only did he continue to not probe the road ahead of him, but twice he simply regrouped and rushed forward along the same road--making no effort to outflank the Israeli blocking force, or even to deploy flank guards. As a result, he was ambushed again and again. Finally, after having his column ambushed three times by a much smaller Israeli force (the Israeli blocking force was a reconnaissance company of about 50 men), he deployed a flanking force, although it is unclear what his intentions were for this force. Luck shined on the Jordanians when the Israeli blocking force stumbled into this flanking unit and got mauled. At that point, the Jordanian commander seized the opportunity to crush the Israeli blocking force by attacking with his main body and sending another force around to cut the Israeli escape route. While these deft moves at the end of the battle allowed the Jordanians to inflict some losses on the Israeli blocking force (heavy losses by Israeli standards), the passivity of the company at Qalqilyah and the inept initial conduct of the reserve force allowed the Israelis to complete their mission and inflict considerably heavier losses on the Jordanians.

As-Samu was an even briefer battle, but the Jordanians clearly seem to have performed worse than they did at Qalqilyah. In this case, the Jordanian reaction was hampered from the start by the misleading reports coming back from the locale as to what was going on and where it was happening. As at Qalqilyah, the Arab Legion piled into

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<sup>65</sup> It is unclear exactly what happened between the other three Hunters and the other Mirage. The Hunters may have engaged the Israeli but could not convert the kill and so returned to base. Alternatively, the other Hunters may simply have fled at the appearance of the Israelis. The Hunter and the Mirage were fairly evenly matched aircraft, therefore, unless the Jordanian pilots were extremely poor, there is every reason to believe that the other three should have shot down or driven off the remaining Mirage. Thus it seems unlikely that all three engaged. By the same token, after the dogfight, the Israelis were full of praise for the Jordanian pilots. While it may be that this judgment was based solely on the performance of the one Jordanian pilot who was eventually shot down, it seems to suggest that at least one other Jordanian Hunter did engage the Israelis. Consequently, my best guess is that two of the Hunters fled when the Mirages appeared while the wingman of the (eventually downed) Hunter pilot remained and tangled with the other Mirage but was driven off. This would seem to explain both the Israeli praise for Jordanian pilots in general, but the fact that the remaining Mirage was not shot down or driven off by the other three Hunters.

<sup>66</sup> Hammel, pp. 20-21; Ehud Yonay, *No Margin for Error: The Making of the Israeli Air Force*, (NY: Pantheon, 1993), p. 220-221.

their trucks and went roaring off down the road pell mell only to smack into an Israeli ambush. While the Jordanians showed real courage and a high degree of cohesion in regrouping and counterattacking, they displayed little skill in the conduct of their assault. Even taking into account the presence of a platoon of Israeli light tanks, given their advantage in size (a full battalion against a paratroop company--which are smaller than standard infantry companies--plus 3-4 AMX-13s) they should have been able to overwhelm this road block or at least force the Israelis back by lapping around their flanks. Jordanian anti-tank teams should have been able to handle such a small number of light tanks with ease: even shoulder-fired weapons were deadly against the AMX-13. Instead, the Jordanian attack was entirely inept and they were easily defeated with only minor casualties to the Israelis. The only impressive element of the Jordanian effort was the performance of the Hunter pilots, whom the Israelis described as very capable.

These battles seem to clearly illustrate a decline in Jordanian military capabilities between 1948 (or 1956) and 1967. Once again, they are weak reeds upon which to base an entire argument, however, they conform very closely to a larger pattern. At Qalqilyah the Jordanians did alright: some aspects of their operations were quite good, others really quite poor. Averaging the strengths and weaknesses, they seem to have done about as well as they had in 1948, perhaps a bit worse, but not much. At as-Samu, they did not do well at all. In fact, they performed miserably. There were some mitigating circumstances: the Israelis had tanks and they did not, the Israelis were defending, and the Israelis held the initiative. In addition, it was a small Jordanian force and it may have been a very poor one. Indeed, in 1967, the Hittin Brigade proved to be one of the worst brigades in the Jordanian army. Nevertheless, the Jordanian performance at as-Samu was orders of magnitude below their performance in 1948. One cannot point to a single occasion when Glubb's troops fumbled a military operation as badly as this battalion did. Consequently, even making allowances for mitigating circumstances, as-Samu indicates a change, a decline in Jordanian performance that would be more fully manifest in the Six-Day War of 1967.

### **The Six-Day War, 1967**

Jordanian performance during the Six-Day War was not the equal of their showing in 1948. While a few Jordanian units showed some real competence, most proved to be only slightly better than their Syrian or Egyptian counterparts. In particular, the Jordanians manifested many of the same debilitating patterns of performance common to the other Arab militaries more than ever before. Although politicization had increased slightly by this time, the crucial change was the eleven-year absence of the British. Overall, the educational standards and general level of socio-economic development of the Legion had improved as a result of general improvements in Jordan's economy and the influx of significant numbers of wealthier, better-educated, and more sophisticated hadaris/Palestinians into the Jordanian armed forces.

#### **Politicization**

As described above, commissariat politicization of the Arab Legion in response to the threat of praetorianism had increased by 1967, but it was not a terribly damaging factor. The King responded to the spate of coup and assassination attempts that followed the departure of the British by tightening up the loyalty of his armed services. However, the principal method Amman employed was to favor Bedouin officers throughout the officer corps, to ensure that key combat units were heavily Bedouin, and to relegate the less-trusted Palestinians to the technical support branches. This is the least pernicious form of commissariatism, because it does not necessarily discourage competence, but simply limits assignments to a still sizable population that is broadly considered loyal.

As long as the favored segment of the population is large enough, or the billets to be filled few enough, there is every reason to believe that standards need not be lowered to ensure that all the slots are filled with members of the favored group. By keeping their military small, the Jordanians were able to fulfill this requirement, and while loyalty was a criteria at all levels, only at the seniormost ranks did it appear to have a higher priority than ability for promotion and command responsibility.

The experience of 1948, combined with 19 years of constant skirmishing with the Israelis had kept the Arab Legion firmly focused on its external security responsibilities. While the Jordanian military retained an internal security role, it never neglected preparations for war with Israel. Jordanian training remained focused on conventional military operations, and war with Israel was specifically identified as the most likely and most important mission of the Legion. Perhaps the best evidence of the Legion's emphasis on external security was the massive expansion and modernization program that began immediately after the 1948 campaign. This program was intended to make the Jordanian armed forces more capable in conventional military operations against Israel. In short, there was no impact from palace-guardism on the Legion either.<sup>67</sup>

### **The Decline of British Influence**

When war broke out between the Arabs and Israel in 1967 the British had been gone from Jordan for eleven years. That break was hardly total--many Jordanian officers still received training in Great Britain, while London sent frequent military missions to Amman for advice and planning--but it was still very important. It removed the British from the day-to-day training and conduct of the Legion. While the long terms of service common to the Legion meant that there were still a good percentage who had trained and even fought under the British, there were many more who had not. In particular, the Legion had expanded dramatically after the departure of the British, rising from 20,000 men in 1955 to 55,000 men in 1967. Consequently, the majority of enlisted personnel and junior officers had not had the benefit of British tutelage. At most, some of the junior officers may have attended Sandhurst or possibly Camberly, or courses in Britain on armored combat or artillery operations or other specialized military disciplines.<sup>68</sup>

The British legacy, however, lingered on. The Jordanian armed forces still had much of the feel of a British colonial army. Its officers' messes clung to all the trappings of British regimental messes and most traditions in the Legion had been established under Peake and Glubb. Jordanian ground and air forces still relied exclusively on British doctrine and organization. The Legion also was equipped largely with British arms, although Amman had begun purchasing very considerable quantities of American equipment such as 155 mm howitzers and M-47 and M-48 Patton tanks. Moreover, the Legion continued to be modeled on the ideal of a small, elite, long-term service army of professionals as it had been conceived by Peake and Glubb.<sup>69</sup>

### **The Balance of Forces**

Although the Israel Defense Forces (IDF) outnumbered and outgunned the Jordanian armed forces, because Israel was forced to fight Egypt and Syria as well, in terms of actual forces engaged, the two sides were about even both in manpower and equipment. The Jordanians had roughly 45,000 troops, 270 tanks, and 200 artillery pieces on the West Bank. These forces were organized into nine brigades (seven infantry and two armored) and several independent battalions. The tiny RJAf consisted of just 24

<sup>67</sup> Be'eri, pp. 230-233, 345; Anthony Cordesman, *Jordanian Arms*, p. 38; Dupuy, p. 378; El Edroos, pp. 317-319, 321-322, 332-333; Gabriel, pp. 29-35; Hammel, p. 286; Metz, p. 234; Mutawi, pp. 16, 44; Edgar O'Ballance, *The Third Arab-Israeli War*, p.172; O'Ballance, *Arab Guerrilla Power*, p. 25; Pascal, et. al., p. 41; Perlmutter, pp. 56-57; Satloff, p. 63; Vatikiotis, pp. 26-29.

<sup>68</sup> Be'eri, p. 344.

<sup>69</sup> Dupuy, p. 283; O'Ballance, *The Third Arab-Israeli War*, p. 172.

Hawker Hunters and five US F-104 Starfighters, but the F-104s had not yet been turned over to the Jordanians and their American pilots flew them to Turkey at the start of hostilities. Against this, the Israelis deployed eight brigades (one armored, two mechanized and five infantry) with about 40,000 men and roughly 200 tanks.<sup>70</sup> The Israeli Air Force had a bit more than 200 combat aircraft, of which 72 were sophisticated French Mirages while the rest were much older Mysteres, Super-Mysteres, Ouragons, and Vautours. However, the IAF also had to deal with Syria, Egypt, and possibly Iraq, whereas the RJAF was free to concentrate fully against Israel.<sup>71</sup>

Jordanian equipment was, on average, slightly better than Israeli equipment. Jordanian tanks were clearly superior to their Israeli opponents. Of the 270 Jordanian tanks on the West Bank, 170 were M-47 and M-48 Pattons and the rest were British Centurions. Against them, the Israelis deployed 50-60 Centurions, 50 Super-Shermans, and nearly 100 French-built M-51 Shermans armed with 75 mm guns rather than the French 105 mm gun on the Israeli-modified Super-Shermans. The Jordanians had US M-113 APCs while the Israelis were still using World War II-vintage M-3 halftracks. Although Amman's artillery was primarily American 105 mm howitzers and even some old British 25-pounders, it also boasted several batteries of US 155 mm guns, while Israel was equipped almost entirely with old French 105 mm howitzers. The Mirage and the Hawker Hunter, the mainstays of the IAF and the RJAF, were essentially on a par, according to the Israelis, because the Mirage was faster and had a more advanced avionics suite, but the Hawker was more maneuverable in a dogfight.<sup>72</sup>

The Jordanians had several other advantages. First, they had had 19 years to establish themselves on the West Bank. Although they had not made the same effort as the Syrians to fortify their positions along the entire border, in places, the Jordanians had built very elaborate fixed defenses. This was especially the case in Jerusalem and along the Jerusalem corridor. Geography also was in Amman's favor. Jerusalem lay at the end of a narrow salient bracketed on three sides by eminently-defendable high ground held by the Jordanians. Similarly, Jordanian forces in Samaria could threaten to attack Tel Aviv, which was less than 20 kilometers from the border, or drive 15-25 kilometers to the sea and cut Israel in half. Israel had the added disadvantage of having to fight three enemies simultaneously, forcing Tel Aviv to divide up the IDF rather than concentrating it against any one foe. Ultimately, Syria's quiescence during the first four days of the war allowed the Israelis to draw off forces from Galilee to fight Jordan, but the vast bulk of the Israeli army was deployed opposite Egypt throughout the conflict. Similarly, the IAF had other responsibilities and was largely unavailable for the Jordanian front on the first day of the war except to destroy the small RJAF.<sup>73</sup>

The Jordanians had at least one important weakness, their command and control arrangements. In this area, King Hussein's commissarist politicization of the Jordanian military had clear repercussions. The Jordanians had no divisional or corps formations because the King feared that such positions would be too powerful as bases from which to overthrow the monarchy. Consequently, Jordanian brigades on the West Bank had tremendous difficulty coordinating their actions because most communications had to go through Amman. The commander of Jordan's Western Command had direct control of all nine brigades on the West Bank plus several independent battalions, plus various

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<sup>70</sup> Israel's 16th "Etzioni" Brigade defending Jerusalem was actually a division-sized formation with 8 battalions (4 active-duty and 4 reserve) as opposed to the normal brigade complement of two or three battalions.

<sup>71</sup> Colonel Eliezer Cohen, *Israel's Best Defense*, Translated by Jonathan Cordis, (NY: Orion Books, 1993), p. 194; El-Edroos, pp. 353-355; 373-383; Hammel, pp. 149-150; 284-287; Yonay, p. 187; Young, p. 51.

<sup>72</sup> El-Edroos, pp. 354, 373-383; Dupuy, pp. 282-285; Hammel, pp. 118, 286; Mutawi, pp. 119-120; Abraham Rabinovich, *The Battle for Jerusalem*, (Philadelphia: The Jewish Publication Society, 1987), pp. 15, 289; Yonay, p. 221; Young, p. 51.

<sup>73</sup> See for example, El-Edroos, pp. 360-361; Mutawi, pp. 113-116.

GHQ reserve assets (mostly additional artillery and anti-aircraft defenses). In addition, Jordan had a very weak General Staff--both institutionally and in terms of personalities--with numerous top military commanders with ambiguous and overlapping responsibilities, so that the GHQ also could not easily execute a coup against the King. Consequently, all major decisions had to be approved by the King and the General Staff was not in a position to ease the burden on the West Bank Command.<sup>74</sup>

Finally, just to add to the command and control mess, King Hussein joined the joint military command established by Egypt and Syria immediately before the outbreak of war. As a condition for Egyptian acceptance, Nasser demanded that Jordan accept an Egyptian General as the new commander-in-chief of Jordanian forces. The Jordanians were fortunate enough to get Lt. General 'Abd al-Mun'im Riyad. Riyad was a superb officer who had distinguished himself in Yemen and was considered one of Egypt's best operational minds.<sup>75</sup> However, neither the United Arab Command, nor the Jordanians had sorted out exactly how Riyad was to fit into the command structure by the time war broke out. Riyad tended to take his orders from Egypt's Field Marshal Amer in consultation with King Hussein, but from there, Riyad's orders were transmitted via the Jordanian General Staff down the normal Jordanian chain of command. Riyad's authority as opposed to the authority of the General Staff in operational matters was left unclear.<sup>76</sup>

### Goals and Plans

Amman's major objective during the Six-Day War was simply to survive intact. Jordan had no particular interest in acquiring any Israeli territory, with the possible exception of the tiny Mt. Scopus enclave in Jerusalem. Consequently, Jordan's military strategy was essentially defensive. The Jordanian General Staff recognized that they lacked the manpower to defend the entire expanse of the West Bank--plus Jordan's East Bank borders with Israel to the north and south of the West Bank--and wanted to concentrate their forces along shorter defensive lines in the mountainous terrain of central Samaria. However, the King felt that politically he could not afford to be seen as surrendering any of the West Bank to the Israelis without a fight, and so he overruled their expert advice and ordered a forward defense of the borders of the West Bank.<sup>77</sup>

There was a critical offensive element of the Jordanian plan. Operation Tariq (Victory) called for a major offensive against Jerusalem to take the Jewish part of the city. Amman expected the Israelis to conquer vast swathes of territory in Samaria and Judea and their intent was to use Jewish Jerusalem as a bargaining chip to get back their lost territories when the fighting ended. Thus the Jordanian General Staff planned an attack west of Jerusalem that would strike south from the Nebi Samuel area and sever the roads in the Jerusalem corridor, trapping the city. An important element of this operation was the seizure of Israel's Mt. Scopus enclave in the northeast section of Jordanian Jerusalem. The Jordanians felt that they had to eliminate this pocket of resistance lest it tie down Jordanian forces needed for the enveloping attack, or serve as a base for an Israeli offensive into northeast Jerusalem.<sup>78</sup>

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<sup>74</sup> Cordesman, *Jordanian Arms*, p. 44; Dupuy, p. 291; El-Edroos, 324-325; Hammel, pp. 300, 309; Mutawi, pp. 157; O'Ballance, *The Third Arab-Israeli War*, p. 223.

<sup>75</sup> For assessments of Riyad's military skills, see Mohamed Heikal, *The Road to Ramadan*, (NY: Ballantine Books, 1975), p. 42; Field Marshal Mohamed Abdel Ghani El-Gamasy, *The October War*, Translated by Gilian Potter, Nadra Marcos, Rosette Frances, (Cairo: The American University in Cairo Press, 1993), pp. 89-90, 108; David A. Korn, *Stalemate: The War of Attrition and Great Power Diplomacy in the Middle East, 1967-1970*, (Boulder, CO: Westview, 1992), p. 108.

<sup>76</sup> El-Edroos, p. 373; Mutawi, pp. 108-114, 117-119; Narkiss, p. 98; O'Ballance, *The Third Arab-Israeli War*, p. 223.

<sup>77</sup> El Edroos, pp. 316, 323-328, 359-367.

<sup>78</sup> Mutawi, pp. 115-116; Narkiss, p. 98.

The Jordanians correctly predicted Israel's strategy for an invasion of the West Bank, estimating the IDF would conduct two major pincer attacks--one at Jerusalem and the other along the Jenin-Nablus axis--coupled with a "defensive" attack around Qalqilyah/Tulkarm to push the Jordanians back from the coastal plain. This allowed the Jordanians to concentrate their forces against these expected thrusts, which along with the requirements of Operation Tariq, largely dictated the deployment of Jordanian forces. The General Staff deployed five infantry brigades along Jordan's borders: one at Jenin, one from Tulkarm to Qalqilyah, one along the corridor from Latrun to Jerusalem, one in and around Jerusalem, and one in Judea mostly between Jerusalem and Hebron. Another infantry brigade and the 60th Armored Brigade were bivouacked in the Jordan valley between Jerusalem and Jericho where they were to move forward to Jerusalem and conduct Operation Tariq. Similarly, an infantry brigade and the elite 40th Armored Brigade were held back in the Jordan valley near the Damiyah Bridge where they could parry the expected Israeli thrust toward Nablus. Finally two independent armored battalions--the 10th and 12th--were deployed forward to provide support for some of the frontline infantry brigades, with the 12th near Jenin and the 10th near Hebron. This deployment scheme left the Jordanian infantry stretched thin at some points, especially in Judea, but succeeded in concentrating division-sized forces in the two main Israeli breakthrough sectors: Jerusalem and Jenin. Indeed, the Jordanians were confident that they could defend the West Bank against an Israeli offensive of 8-12 brigades for two or three weeks.<sup>79</sup>

Israel was desperate to avoid a war with Jordan. Israel wanted only to fight Egypt, and before the outbreak of hostilities made several secret efforts to persuade the Jordanians that they had no desire to fight Jordan in any way shape or form. Although both the Israeli GHQ and General Narkiss, in charge of Israel's central command facing Jordan, recognized the possibility of war with Jordan, the political context prevented them from developing elaborate plans. Basically, Narkiss really did not know what forces would be available to him. Tel Aviv wanted to maximize the number of brigades deployed against Egypt and this front would have first priority for all Israeli forces. In addition, there were also the Syrians to consider. If the Israeli victory over the Egyptians was swift and the Syrians stayed out, Narkiss could expect some reinforcements from Southern Command facing Egypt and Northern Command facing Syria. However, just how much he could expect and when he might expect them were very much up in the air. Consequently, the Israelis could only draw up very sketchy plans for a drive south toward Jenin and Nablus, a push from the coastal plan against Qalqilyah and Tulkarm, a limited offensive in Jerusalem to link up with the Mt. Scopus enclave and another limited offensive to take Latrun.<sup>80</sup>

### **Initial Moves**

Jordan was well prepared for the Israeli offensive when it finally materialized on 5 June. Jordanian intelligence learned of the impending Israeli offensive against Egypt on 3 June and Amman passed this information to Cairo immediately. In addition, King Hussein claims in his memoirs that he believed war with Israel had become inevitable as early as 22 May with Nasser's closing of the straits of Tiran.<sup>81</sup> Consequently, Jordan spent this time deploying its forces to their wartime positions, building and repairing fortifications, stockpiling provisions, and otherwise bracing for the coming onslaught. The one area in which the Jordanians appear to have failed to take adequate preparations was the deployment of their air force. The RJAf had no hardened shelters and was left

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<sup>79</sup> El-Edroos, pp. 373-383; Mutawi, pp. 89, 113-117; Narkiss, pp. 88-91.

<sup>80</sup> Dupuy, pp. 284-285; El-Edroos, pp. 353-355; Narkiss, p. 87; O'Ballance, *The Third Arab-Israeli War*, p. 223.

<sup>81</sup> Hussein of Jordan, pp. 11-20, 35-36.



concentrated at Mafraq air base rather than dispersing its aircraft around the country, to reduce their vulnerability.<sup>82</sup>

Early on 5 June, Nasser and the Egyptian General Staff told King Hussein and the Jordanian General Staff that the Egyptian Air Force had destroyed the IAF and the Egyptian Army was already driving into southern Israel. Based on this, they asked Jordan to launch an armored attack into the Negev to link up with the (mythical) Egyptian attack. General Riyadh and King Hussein complied with the Egyptian request in full. Although the Egyptian request went well beyond what Jordan originally had intended to undertake in its prewar planning, the information from Egypt indicating that the Israeli air force had been destroyed--eliminating it as a threat to Jordan and freeing up the Egyptian Air Force to provide air support to the Jordanians--and that Egyptian armor was threatening to cut Israel in half, caused the King and Riyadh to agree to the more ambitious strategy. Despite protests from some members of the Jordanian General Staff, Riyadh and the King apparently saw this as too good an opportunity to squander and so they ordered a considerably bigger operation than they had previously believed prudent.<sup>83</sup>

Orders quickly came down from Amman for the Jordanian armed forces to begin implementing their preplanned war operations. All across the front Jordanian units began opening fire on whatever was opposite them, often without any particular rhyme or reason. Jordanian artillery began bombarding Israeli cities and military installations near the border. The Jordanian 12th Armored Battalion was ordered to attack an Israeli unit deployed near the border, but it could not get organized and moving in time to conduct this mission before the Israelis launched their own offensive. As the Egyptians had requested, but not as envisioned in Jordanian planning, the 60th Armored Brigade was sent south to the Hebron area to develop an attack into the Negev to link up with the (mythical) Egyptian drive from Sinai. In addition, the 40th Armored Brigade was ordered south to take over the former mission of the 60th Brigade in Operation Tariq.<sup>84</sup>

The Israelis tried even as late as the morning of 5 June to prevent the war from spreading to Jordan, but the King had already committed himself and rejected their entreaties. The Jordanian attacks did little but provoke the Israelis. Amman sent 16 of its Hawker Hunters probably to attack Tel Aviv and Ben Gurion airport. However, because Jordanian military intelligence did not have one shred of information about Israeli air bases, the Jordanian pilots were forced to improvise the entire operation. The Jordanians appear to have gotten lost because they ended up attacking the Israeli beach resort of Netanyah and the nearby (abandoned) airfield at Kfar Sirkin instead. Even in these attacks they did poorly, causing only light damage to some of the structures at the airfield and destroying one Noratlas transport that had been dispersed there.<sup>85</sup> Nevertheless, this raid plus the Jordanian artillery bombardment and small arms fire in Jerusalem was

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<sup>82</sup> Dupuy, p. 247; Mutawi, pp. 118, 122; Narkiss, p. 88.

<sup>83</sup> Hussein of Jordan, pp. 60-63, 66, 71, 76-79; Mutawi, p. 144; O'Ballance, *The Third Arab-Israeli War*, pp. 68, 142.

<sup>84</sup> Cohen, p. 218; Dupuy, p. 287; El Edroos, pp. 379-386; Hussein of Jordan, pp. 76-79; Mutawi, pp. 144, 149-151; Narkiss, pp. 103-104; O'Ballance, *The Third Arab-Israeli War*, pp. 70, 127; O'Ballance, *No Victor, No Vanquished*, p. 236; Shimon Shamir, "Arab Military Lessons from the October War," in Louis Williams ed., *International Symposium on the Military Aspects of the Israeli-Arab Conflict*, (Tel Aviv: University Publishing Projects, 1975), pp. 172-173.

<sup>85</sup> I assume that the Jordanians were lost because there was no reason on earth for them to have attacked Netanyah and Kfar Sirkin. Netanyah was a resort town of no military value, and wasn't even a major population center. Similarly, Kfar Sirkin had not been used by the Israeli Air Force for years and it was simply luck that a transport was present, dispersed there by a cautious Israeli squadron commander. However, Kfar Sirkin in relation to Netanyah approximates the location of Ben Gurion Airport to Tel Aviv just to the south of Netanyah and Kfar Sirkin. Thus it seems far more likely that the Jordanians were going after Israel's largest city and its largest and best known airfield, got lost, and mistook Netanyah and Kfar Sirkin for their actual targets.

enough to warrant Israeli retaliation. At about 1300 hours, while the Hunters were being refueled and rearmed for their next mission, eight IAF Mirages struck Amman International and Mafrag airfields, destroying 16 of 22 Hunters there and badly damaging another four. The remaining two Hunters were late returning from Israel and tried to engage a pair of the attacking Mirages. Despite their sudden appearance and the greater maneuverability of the Hunters, the Israelis quickly gained the advantage and one Hunter was shot down immediately. The second Jordanian pilot was fairly good, and so it took the other Israeli Mirage several passes to shoot him down.<sup>86</sup>

### *Israel Decides on War*

It was the Jordanian threat to Jerusalem, however, that finally provoked Tel Aviv to launch a general offensive against the West Bank. Around noon on 5 June, General Riyadh ordered a battalion of the 27th Infantry Brigade deployed in Jerusalem to seize the hill of Jebel Mukhabber and Government House south of the Old City. Riyadh wanted to secure these positions to prevent Israeli forces in Jerusalem from striking south against his planned thrust to link up with the Egyptians in the Negev. Since Government House was considered neutral territory it was undefended and the Jordanians occupied both the compound and the hill without trouble. The Jordanians then continued their attack westward against the Israeli settlement of Ramat Rachel. This time the Israelis brought up several companies of infantry to hold the area. The Jordanians did not expect resistance, launched a frontal assault on the settlement, and were driven back quickly and easily by the IDF. Several hours earlier, Radio Amman had announced the fall of Jebel Mukhabber, which the Israelis had dismissed as Jordanian propaganda. However, when Radio Amman then announced the fall of Mt. Scopus after Jebel Mukhabber had actually been taken, Tel Aviv saw this as a preview of things to come.<sup>87</sup>

Israel finally abandoned its hope of keeping Jordan out of the war and ordered a full-scale offensive against the West Bank. For the operation, Tel Aviv reassigned an *ugdah* (a divisional task-force, plural *ugdot*) commanded by Brigadier General Elad Peled with one armored brigade, one mechanized brigade and one paratroop brigade from the northern front facing Syria to mount the drive on Jenin and Nablus. Later, the Israeli General Staff also transferred a reserve paratroop brigade from Southern Command to Central Command to be used in Jerusalem. General Narkiss intended to conduct a double-envelopment of Jerusalem, using the paratroopers to attack northeast into Shaykh Jarrah to link up with the enclave on Mt. Scopus and then swing south along the Augusta-Victoria ridge. The 16th "Etzioni" Brigade would be responsible for retaking Jebel Mukhabber and Government House in the south and then pushing east and north around the southern wall of the Old City. Other elements of the oversized 16th Brigade would hold the line elsewhere in Jerusalem. Meanwhile, the 10th "Harel" Mechanized Brigade would attack from the Jerusalem corridor north toward Ramallah and then east to link up with Mt. Scopus and possibly envelop Jerusalem from the north. An Israeli infantry brigade would be responsible for attacking Latrun as well as driving the Jordanians back from the Tulkarm-Qalqilyah area, and finally another infantry brigade would watch the Jordanian forces in Judea and the east bank area south of the Dead Sea.<sup>88</sup>

### **Battles Around Jerusalem**

The struggle for Jerusalem began in earnest later that afternoon, when an Israeli infantry battalion from the 16th Brigade reinforced with a company of ancient and mechanically unreliable Sherman tanks attacked the Jordanians at Government House.

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<sup>86</sup> Cohen, pp. 218-220; Dupuy, p. 247; Hussein of Jordan, pp. 66-67; O'Ballance, *The Third Arab-Israeli War*, p. 70; Yonay, pp. 250-253.

<sup>87</sup> Dupuy, pp. 293-294; Hammel, pp. 292-294; Mutawi, pp. 124-125, 132-133; Narkiss, pp. 113-115.

<sup>88</sup> Dupuy, pp. 284-285, 294; Hammel, pp. 295-297; Mutawi, pp. 130-133; Narkiss, pp. 109-113, 118-121.

The Jordanians fought very poorly. They had failed to deploy in proper defensive positions to defend the compound and could put up only token resistance. Throughout the battle, Jordanian artillery fire was highly inaccurate with shells falling on both sides indiscriminately. The Israeli attack initially got hung up on the difficult terrain, with the result that all but three of the Shermans got stuck and the Israeli infantry battalion attacked piecemeal. Still the Jordanians could not keep even such a clumsy assault out, and once the Israelis had penetrated into the Government House compound, the Jordanian soldiers fought in place without reorienting themselves to adapt to the fact that the Israelis were now inside the compound. The Jordanian battalion commander bolted when it became clear the Israelis would prevail, and although most of his troops stayed on to continue the fight, because they would neither counterattack to throw the Israelis off the hill nor reform their lines to contain the Israeli breakthrough, it was simply a matter of time before they were defeated.<sup>89</sup>

The attack on Government House went so well that the IDF battalion went on to clear "the Sausage" and "the Bell" two elaborate Jordanian trench and bunker systems guarding the approaches to Jebel Mukhaber on their side of the ceasefire line. The Sausage faced west, and had been designed to have the neutral Government House compound as the anchor for its right (northern) flank, with the Bell at its southern end, facing south and guarding its left (southern) flank. With Government House in their hands, the Israelis were able to move east and then south down Jebel Mukhaber, rolling up the Sausage position from its right flank and then falling on the Bell from the rear. Here as well, the Jordanians stayed in their positions and fought on, often to the death, but without counterattacking or otherwise reorienting to meet the Israeli flanking attack. Consequently, they too were systematically overpowered by Israeli infantry without doing much damage to the Israelis. The Israeli commander who led the operation could only say, "In the Sausage and the Bell they fought stupidly. The Jordanian firing positions were badly planned. They expected us only from one direction. Therefore, we were always fighting one against one. We came down the Sausage and attacked the Bell from the rear, and they were not smart enough to reorganize themselves to stop us."<sup>90</sup> In the end, the entire Jordanian battalion was destroyed while inflicting only minimal casualties on the Israelis.<sup>91</sup>

At the beginning of the war, Jordan had seven battalions of infantry in and around Jerusalem. Late in the afternoon of 5 June, another battalion of the 27th Infantry Brigade was ordered to reinforce the units already there. However, initially, few of these units could coordinate their actions because they belonged to at least four different brigades and there was no division command to direct operations. In response to this chaos, Amman appointed Brigadier Ata 'Ali Haza'ah, commander of the 3rd Infantry Brigade, overall commander of all Jordanian forces in Jerusalem. Haza'ah's chief concern was an Israeli attack into Shaykh Jarrah to try to relieve Mt. Scopus and so he ordered a battalion of his own 3rd Brigade positioned north of Jerusalem to redeploy farther south to link up with the defenses in Shaykh Jarrah. He then ordered the newly-arrived battalion of the 27th Infantry Brigade to replace the battalion of 3rd Brigade north of Jerusalem. By this point, Amman had finally realized that the Egyptian claims of destroying the IAF and mounting an offensive into Israel were lies. In particular, the increasing number of Israeli aircraft appearing over Jordanian airspace, and the absence of any Egyptian aircraft convinced the Jordanians that it was the Egyptian air force that had been destroyed that morning. Realizing that there was no Egyptian armored column

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<sup>89</sup> Dupuy, pp. 294-295; Hammel, pp. 295-300; Robert Moskin, *Among Lions: The Definitive Account of the 1967 Battle for Jerusalem*, (NY: Arbor House, 1982), pp. 139-158; Mutawi, p. 133; Narkiss, pp. 123-128; Rabinovich, pp. 120-127.

<sup>90</sup> Quoted in Moskin, p. 158.

<sup>91</sup> Dupuy, pp. 294-295; Hammel, pp. 299, 301-304; Moskin, pp. 139-158; Narkiss, pp. 128-135; Rabinovich, pp. 120-127.

driving into the Negev and that Jerusalem was already under attack, General Riyad ordered both Jordanian armored brigades to reverse direction: the 40th was sent north to Jenin while the 60th was ordered to move to the ridgeline north of Jerusalem to implement Operation Tariq.<sup>92</sup>

#### *Operations Along the Jerusalem Corridor*

The next Israeli attack hit the Jordanian positions northwest of Jerusalem along the steep ridges overlooking the Jerusalem corridor. General Narkiss ordered the 10th Mechanized Brigade to drive north to take the Radar Hill defenses and then turn east to swing around the right flank of the Jordanian defensive lines in Jerusalem. The ridgeline near Radar Hill where the Israelis attacked was held by a battalion of the 2nd "Hashimi" Infantry Brigade and the newly arrived battalion of the 27th Infantry Brigade. The Jordanians had built extensive fortifications on these heights, recognizing them as key positions either for an outflanking attack against Jerusalem or else as the base for a drive on Ramallah. However, in some places, the Jordanians had concluded that the cliff faces were too steep to be climbed and so had left them only lightly defended.<sup>93</sup>

The Israelis attacked at five points along the Jordanian lines, in some places they attacked into the teeth of the Jordanian positions, at others they attacked in sectors left undefended because of the terrain. While the Israelis encountered some severe problems climbing the escarpment--the 10th Mechanized Brigade lost all 10 of its Centurions and many of its M-51 Shermans to boulders and mechanical failures--they eventually made it to the top at every point. Initially, the Jordanians poured fire onto the Israelis, including artillery barrages. Still, this bombardment did not cause many casualties to the Israelis and only slightly slowed their breaching operations. Once the Israelis had climbed the cliff faces and breached the Jordanian minefields, the Arab Legion battalions collapsed. Both Jordanian battalions put up heavy resistance against the initial Israeli thrust, but the IDF units were able to employ accurate fire and deft maneuver to punch through or outflank each of the Jordanian positions. In many cases, when the Israelis penetrated their lines (and in a number of cases, when the Israelis simply got close) the Jordanian officers fled. The Israelis reported afterward that they did not find one Jordanian above the rank of sergeant among the dead and captured from the battle. The desertion of their officers produced mixed results: some units disintegrated and fled too, while others remained in place and fought on. Nevertheless, just as had been the case at Jebel Mukhaber, the Jordanians would not reorient their positions or counterattack to meet the Israeli penetrations and flanking maneuvers and so the entire ridgeline was taken fairly quickly and rather easily.<sup>94</sup>

A climactic showdown was brewing between the Israeli 10th Mechanized Brigade and the Jordanian 60th Armored Brigade. Both sides recognized the hill of Tel al-Ful as a critical height north of Jerusalem from which the Jordanians could block any further Israeli advance north and east of the city. Consequently, Amman ordered the M-48 battalion of the 60th Armored Brigade to get there as quickly as it could, while Tel Aviv ordered the tank battalion of the 10th Mechanized brigade to do the same. Because of breakdowns in the rough terrain, the Israelis arrived in the early morning hours of 6 June with just six Shermans and ten halftracks. The Israelis had been aware of the 60th Armored Brigade's movement toward Tel al-Ful, and had hit the Jordanian armor with airstrikes twice during the night. These attacks only destroyed a couple of tanks and some other vehicles, but they delayed and disrupted the battalion's movement so that it

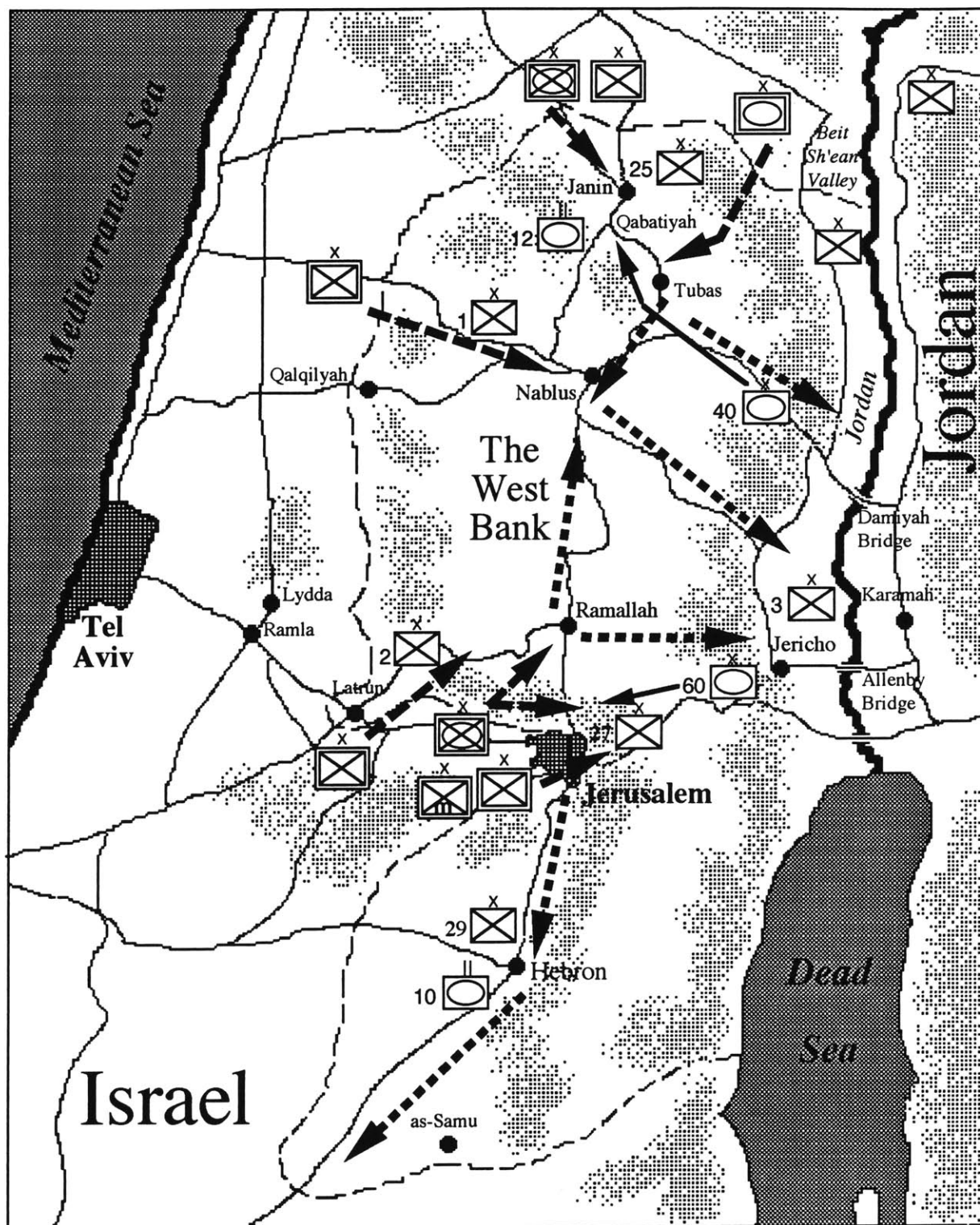
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<sup>92</sup> Hammel, pp. 309-310; Hussein of Jordan, p. 78; Mutawi, pp. 119-120.


<sup>93</sup> Dupuy, pp. 295-298; El-Edroos, pp. 378, 411; Hammel, pp. 313-320; Moskin, pp. 184-189; Narkiss, pp. 138-146; O'Ballance, *The Third Arab-Israeli War*, p. 186.

<sup>94</sup> Dupuy, pp. 295-298; El-Edroos, pp. 377-378, 411; Hammel, pp. 313-320; Moskin, pp. 184-189; Mutawi, p. 133; Narkiss, pp. 138-152, 191-192; O'Ballance, *The Third Arab-Israeli War*, p. 186; Rabinovich, p. 152.

## Israel's Conquest of the West Bank, June 1967



-  - Selected Jordanian moves, 5-8 June
-  - Israeli Attacks, 5-6 June
-  - Israeli Attacks, 7-8 June

-  - Jordanian Units
-  - Israeli Units

did not reach Tel al-Ful until after dawn on 6 June.<sup>95</sup>

The Jordanians had every advantage at Tel al-Ful--equipment, numbers, terrain--but were still defeated. The lead Patton company of the 60th Armored Brigade arrived shortly after dawn and opened fire on the Israelis from a higher elevation, knocking out several of the half-tracks and forcing the rest to fall back. The Israeli Shermans returned fire, but at the relatively long range, the rounds from their 75 mm guns simply bounced off the Pattons' armor. The Jordanians pressed their attack slowly and destroyed one of the Shermans. An Israeli tank commander whose main gun had jammed noticed that the Jordanians had attached extra fuel tanks to the rear deck of their tanks and he began firing at these fuel tanks with his machine gun, eventually setting one ablaze. He eventually succeeded in destroying another of the Pattons in this way, prompting the others to turn back. Other elements of the Jordanian tank battalion had since arrived in the area, and these forces took up positions in a small village at the foot of Tel al-Ful. However, the Israelis too had received reinforcements, and with about a reinforced company of Shermans and mechanized infantry, they attacked the Jordanian armor at Tel al-Ful. Most of the Jordanian M-48 battalion was well deployed with infantry support among the buildings at the foot of the hill, but the Israelis used part of their force to provide a base of fire while the rest swung around and hit the Jordanian positions from the flank. In a brief firefight, the Jordanians lost another 4-6 Pattons and then fled the battlefield. The Jordanian forces--both tanks and infantry--had remained static in their defensive positions rather than attempting to maneuver against the Israelis or to reform their lines to meet the Israeli flanking attack. In addition, their marksmanship was poor, with the result that they caused only minor damage to the Israelis.<sup>96</sup>

### *Latrun*

The Israelis massed a reinforced brigade to take the Latrun position that had proven so troublesome in 1948. The Jordanians had an infantry battalion in the position itself, and a second battalion guarding its flanks. The Israelis intended to launch a diversionary attack against the southern flank of the Latrun promontory, while the main effort fell against the northern flank. A battalion of artillery began pounding the Jordanian positions around 0300 on 6 June and about an hour later the IDF launched its diversionary attack. Although the Israeli unit was very light and did not press its attack very hard, the Jordanian units throughout Latrun disintegrated. Many surrendered and the rest fled. Very few of the Jordanians offered any resistance, and within two hours Latrun was in Israeli hands.<sup>97</sup>

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<sup>95</sup> Hammel, pp. 305-315; Narkiss, pp. 136-137, 159-162.

<sup>96</sup> Dupuy, p. 299; Hammel, pp. 315-320, 335-336; Herzog, *The Arab-Israeli Wars*, p. 176; Moskin, pp. 289-290; Narkiss, pp. 192-193, 200, 211-213; O'Ballance, *The Third Arab-Israeli War*, pp. 192-193.

Jordanian accounts of this battle, as in many other battles on the West Bank, claim that most of their losses were to airstrikes. The Israeli accounts, however, make no mention of airstrikes whatsoever. I favor the Israeli version for two reasons. First, the Israeli accounts are extremely detailed and logical, and generally lack contradictions, while the same cannot be said for the Jordanian versions. In particular, General Narkiss' account of the fighting is very good in terms of its objectivity and attention to detail, and it notes exactly when and where he received airstrikes from the IAF. Second, since the Six-Day War, the Jordanians have tended to make the IAF into a kind of *deus ex machina* against which they were powerless and could not have been expected to prevail, thereby somehow excusing their defeats. (In an extreme example of this kind of obfuscation, El-Edroos claims that "relentless and non-stop" Israeli air strikes prevented the 60th Armored Brigade from getting any further than al-Ayzariyah--10 kilometers from Tel al-Ful--and thus he claims that no battle ever took place between the 60th Armored Brigade and the Israeli 10th Mechanized Brigade. See El-Edroos, pp. 379-380.) As a result, Israeli airstrikes appear constantly throughout Jordanian accounts of the fighting and invariably are portrayed as the deciding factor in the battle. While IAF strikes were certainly numerous and important in the Israeli victory, the reality falls far short of the Jordanian claims.

<sup>97</sup> Dupuy, p. 299; El-Edroos, p. 378; Hammel, pp. 359-361; Herzog, *The Arab-Israeli Wars*, p. 172;

## The Battle for Jerusalem

During the night of 5/6 June, the Israelis attacked Ammunition Hill in the Shaykh Jarrah area to try to link up with their enclave at Mt. Scopus. During the 19 years they had held East Jerusalem, the Jordanians had turned Ammunition Hill into a fortress with concentric trench lines circling the hill, dozens of superbly camouflaged bunkers, concertina wire, and minefields. The Jordanians employed a British-style all-around defense and all of the bunkers and firing positions provided overlapping fields of fire. The Jordanians had a reinforced battalion of the 3rd Brigade defending Shaykh Jarrah and Ammunition Hill, supported by artillery and mortars. The Israelis attacked at 0200 with a paratroop brigade and a company of Sherman tanks, also supported by artillery and mortars. The attack was hastily planned and suffered from its lack of preparations and from indecisiveness among Tel Aviv's commanders, who kept the paratroopers exposed to accurate Jordanian fire in their jump-off positions while they debated whether to launch the attack that night or the next morning.<sup>98</sup>

Finally, the paratroopers received permission to attack and they launched a frontal assault on Ammunition Hill and Shaykh Jarrah. The Jordanians were well prepared for the Israeli attack on Ammunition Hill and fought back fiercely. Their fire was highly accurate and inflicted numerous casualties on the Israelis as they crossed the barren no-man's land and then worked their way through the Jordanian minefields and wire. Eventually, the Israelis pushed through and reached the southern base of the hill where they turned north and began driving north into the trench system itself. The Jordanian soldiers fought extremely bravely, refusing to give up an inch to the Israelis. Because of their determination, their marksmanship, and the superb design of their defenses, they inflicted very heavy losses on the Israelis. However, once again they would not reorient their forces to reinforce their lines facing the main Israeli thrust nor would they counterattack the Israelis as they worked their way up the hill. Instead they clung tenaciously to their firing positions--even when these faced the wrong way given the actual direction of the Israeli attack. Only when the end was clearly approaching did the Jordanian company commander mount a counterattack with his remaining reserve. This modest effort stopped the Israelis just long enough to allow the Jordanian commander to make good his escape before the Israelis enveloped and massacred the counterattack force. By morning, Jordan had lost Ammunition Hill. All told, the Israelis suffered 50 dead and 150 wounded, while the Jordanians suffered 106 dead and about 100 wounded (this represents all remaining members of the force on the hill).<sup>99</sup>

The fall of Ammunition Hill led to the disintegration of the Jordanian positions north of the Old City. Elements of the battalion deployed on Ammunition Hill holding

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Narkiss, pp. 195-199. Accounts vary as to what happened at Latrun. I have followed General Narkiss' account as probably being the most accurate. Hammel contends that the Israelis employed a battalion of infantry supported by a company of Shermans against the southern flank, which cut the narrow neck of Latrun and then hit the Jordanian positions from the rear, leading to their rapid collapse. The official Israeli history, notes simply that the Jordanians fought poorly there and the IDF had little trouble taking it. Neither Herzog nor Dupuy has much to say about Latrun, only that the Israelis overpowered the Jordanians quickly. El Edroos, however, contends that there was a "savage fight" between the two sides in which the Israelis eventually prevailed. El-Edroos' account is almost certainly nonsense or propaganda, but it is difficult to decide between the differing descriptions of Hammel and Narkiss. I opted for Narkiss' primarily because Hammel's sources are weakest on the fighting in the West Bank while Narkiss was the commander of the operation and his account is based on the detailed log kept by his aide during the war.

<sup>98</sup> Dupuy, pp. 297-299; Hammel, pp. 321-327; Herzog, *The Arab-Israeli Wars*, pp. 173-175; Israel Ministry of Defense, *The Six-Day War*, (Israel: Israel Press, 1967), p. 95; Narkiss, pp. 118-121, 155-157, 158-159.

<sup>99</sup> Dupuy, pp. 297-299; El-Edroos, pp. 378-379; Hammel, pp. 331-335; Herzog, *The Arab-Israeli Wars*, pp. 173-176; Moskin, pp. 208-223, 255-274; Mutawi, p. 133; Narkiss, pp. 158-159, 162-181; O'Ballance, *The Third Arab-Israeli War*, p. 197; Rabinovich, pp. 193-230.



Shaykh Jarrah mostly fell apart and fled when they were attacked by Israeli paratroopers. They put up some sporadic resistance as the Israelis breached their minefields and wire but then largely abandoned their positions before the Israelis could close with them. The Israelis rushed through the gap and pressed on into East Jerusalem, trying to work their way east to encircle the Old City and secure its gates. Some Jordanian soldiers took up positions alone or in groups in this area while the rest fled. The Israelis were forced to move slowly and to carefully clear their way of Jordanian snipers, roadblocks or other defensive positions, but the Jordanians offered no coordinated defense and so could slow the Israelis but could not stop them.<sup>100</sup>

By the morning of 6 June, initiative was entirely in the hands of the Israelis in and around Jerusalem and the Jordanian units in the city could do little more than try to defend against each Israeli thrust. Most of the Jordanian artillery deployed in the hills east of Jerusalem had been silenced by Israeli airstrikes. The Israeli paratroopers worked their way east along the north wall of the Old City. Jordanian snipers on the wall proved to be excellent marksmen and caused a number of casualties among the Israelis but could not stop their advance. South of the old city, the Israeli 16th brigade attacked the Jordanian positions on Abu Tor, the hill northeast of Jebel Mukhaber. The Israelis mounted a very poor frontal assault that struck the Jordanians piecemeal, and the Jordanians inflicted heavy casualties on the Israelis with small arms and artillery fire. Nevertheless, the Legionnaires failed to reorganize to deal with the Israelis once they had penetrated the defensive lines in one sector. The Jordanians mounted a counterattack with just four men who, though brave, could not stop the Israelis from clearing the fortifications and capturing the hill. The Israelis then turned northwest and hit the Jordanian defenses on Mt. Zion from the rear. The Jordanian unit there simply collapsed and fled in the face of the Israeli flanking maneuver, with some of the soldiers even donning women's clothes in their effort to get away.<sup>101</sup>

Later in the day the Israeli paratroopers north of the city were joined by Shermans from the 10th Mechanized Brigade which had secured Tel al-Ful, sent a mechanized battalion task force off to capture Ramallah and sent its armored battalion east to join the envelopment of Jerusalem. The Jordanian units north of Jerusalem could not hold the Israeli armor back and by mid-morning the 10th Mechanized Brigade was within a kilometer of Ammunition Hill. A Jordanian battalion from the 3rd Infantry Brigade deployed on Mivtar Hill, north of Ammunition Hill, caught the Israeli armor in an anti-tank ambush and--with the aid of a mistaken strike by IAF Mysteres--destroyed two Shermans and two half-tracks and damaged another Sherman. As on Ammunition Hill, the Jordanian company was deployed in British-style 360-degree "hedgehog" defenses along the southern face of Mivtar hill. The Israelis set out a covering force to pin the Jordanians in their trenches and then sent an infantry unit backed by tanks around to the north side of the hill, which they climbed and then attacked back down the southern face. Despite their all-around defenses and plentiful anti-tank weapons, the Jordanians were not much of an obstacle to the Israelis. Some Jordanians fought fiercely, many remained in their positions and had to be cleared in close fighting, but as was the case elsewhere, the Jordanians failed to redeploy or counterattack to block the Israeli clearing operation and so the Israelis were able to systematically work their way through the trench system reducing each area of resistance in turn.<sup>102</sup>

By the late afternoon of 6 June The Old City was virtually surrounded by Israeli forces, and only the Augusta Victoria ridge directly east of the Old City remained in Jordanian hands. Brigadier Haza'ah had a battalion in the Old City and he concentrated

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<sup>100</sup> Hammel, pp. 328-331; Narkiss, pp. 179-188.

<sup>101</sup> Hammel, pp. 339-341; Moskin, pp. 275-309; Narkiss, pp. 216-217, 222-223, 224, 229-233; Rabinovich, pp. 258-348.

<sup>102</sup> Dupuy, p. 300; Hammel, pp. 336-337; Narkiss, pp. 199-202, 207, 211-216, 222, 225-229, 235.



the remnants of other units, amounting to about another battalion, to defend the Augusta Victoria. Although Haza'ah believed the city was lost, the King himself asked him to try to hang on to the Old City and the Augusta Victoria until reinforcements could be sent. In the early evening, the Israelis sent a combined force of paratroopers and Shermans from the 10th Mechanized Brigade to take this ridge and complete the encirclement of Jerusalem. In the darkness the Israelis lost their way and rather than climbing the Augusta Victoria found themselves descending into the Kidron valley where they were taken in a crossfire by Jordanians on the ridge as well as on the Old City walls. The Jordanians destroyed two Shermans and several jeeps before the Israelis could pull back and regroup. That same evening, Amman ordered the remaining elements of the 27th "Imam 'Ali" Infantry Brigade to reinforce Jerusalem, as the King had promised Haza'ah. Meanwhile, the second battalion of the 60th Armored Brigade also was finally approaching East Jerusalem, after having been ordered to the Ramat Rachel area the day before. However, both Jordanian units were caught by Israeli airstrikes on the narrow roads through the Judean hills. The armored battalion lost several tanks, and both columns were scattered and driven off before they could reach Jerusalem.<sup>103</sup>

### **Battles in Northern Samaria**

In the north, the Jordanian plans and deployments were entirely defensive. Samaria was too large to be adequately defended by the three infantry brigades, one armored brigade, one armored battalion and one infantry battalion assigned to defend it. The Jordanians hoped only to minimize the amount of territory Israel might take, and to prevent the IDF from mounting a major drive either down the Jordan river valley or along the Jenin-Nablus-Ramallah axis. Consequently, Jordanian forces were deployed with the 25th Infantry Brigade and the main body of the 12th Independent Armored Battalion around Jenin, the 1st Infantry Brigade defending Tulkarm and Qalqilyah, and the 6th Infantry and 40th Armored Brigades at the Damiyah bridge in the Jordan river valley.<sup>104</sup>

The Jordanians had read Israeli intentions well. The Israelis intended to use an infantry brigade to demonstrate in the Beisan (Bayt She'an) valley as if preparing to drive down the Jordan valley, meanwhile, another infantry brigade would attack from the coastal plain to drive the Jordanians back from Tulkarm and Qalqilyah. Finally, the main effort, comprising an ugdah under Brigadier General Elad Peled with an armored brigade, a mechanized brigade, and an infantry brigade would drive south toward Jenin and then on to Nablus. Thus despite the size of the area to be covered, the Jordanian force was roughly equal to its Israeli counterpart and was perfectly deployed along the Israelis' primary axes of advance.<sup>105</sup>

### **Jenin**

At 1700 hours the Israelis began their offensive against Jenin. The IAF conducted airstrikes against Jordanian artillery positions in the Dotan Valley, and Peled's three brigades crossed over into the West Bank. Peled deployed his armored brigade to the east of Jenin and sent it southwest to hit the Jenin-Tubas road well to the south of Jenin. Meanwhile, Peled used his two other brigades to conduct a double envelopment of the town. Peled's infantry brigade was positioned northeast of Jenin and it attacked south while his mechanized brigade burst through the thin Jordanian screening force northwest of the town and began pushing south toward the main Jenin-Nablus road in two battle groups. In response, the commander of the Jordanian 25th Infantry Brigade at Jenin, Brigadier Awad Muhammad Khalidi, formed up two battle groups of his own, each with

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<sup>103</sup> Dupuy, pp. 300-302; El-Edroos, p. 380; Hammel, pp. 342-346; Mutawi, pp. 133-134; Narkiss, pp. 238-243.

<sup>104</sup> Dupuy, pp. 306-307; Herzog, *The Arab-Israeli Wars*, p. 177; Mutawi, pp. 135-136.

<sup>105</sup> Dupuy, p. 308; Hammel, pp. 362-363; Herzog, *The Arab-Israeli Wars*, pp. 177-179; Mutawi, p. 136.

a company of infantry, an anti-tank team, and a company of M-47 Pattons to block the two Israeli columns. Khalidi probably realized that his force was too small to hold Jenin against determined Israeli assault. However, the elite 40th Armored Brigade was headed back north to Jenin after spending the morning driving south to Jericho, and Khalidi probably reasoned that if he could delay the Israelis in the excellent defensive terrain north and west of Jenin, the 40th Armored Brigade would arrive and be able to take over the defense of the town. Thus both Jordanian forces took up positions on ridges blocking the routes of advance of the two Israeli battle groups.<sup>106</sup>

The eastern task force of the Israeli mechanized brigade hit the eastern Jordanian blocking force at the eastern entrance to the Dotan valley. The Jordanians were deployed across the gap in three reinforcing lines, with the Pattons in the last line. Because there was no way to outflank the Jordanian positions, the Israelis launched two frontal assaults against the Jordanian lines but the Legionnaires beat them back with losses both times. The Israelis came up with a clever ruse and at dawn on 6 June, began pulling back from their positions as if retreating. As the Israelis had hoped, the Jordanian commander concluded that the Israelis were running, and he seized the opportunity to finish them off. The Pattons charged, only to have the Israelis turn and fight. In the clash, the Jordanians lost 8 of 13 Pattons before pulling back. The Israelis then retreated again and the Jordanians again followed, only to have the Israelis turn on them once more and finish off the remaining Pattons. With the Pattons gone, the Israeli Super-Shermans and mechanized infantry resumed their attack on the Jordanian positions. The Jordanian infantry and anti-tank teams continued to fight back hard and were able to repulse the initial Israeli assault. However, the Israelis kept up the attack and, without armor support, the Jordanians could not hold back the Israeli combined arms team.<sup>107</sup>

The Israeli breakthrough along the Jenin-Nablus road undermined the Jordanian defense of Jenin. General Khalidi had only a small force left in the town itself and the 40th Armored Brigade had not yet arrived. Khalidi ordered his second battlegroup to abandon its blocking position and work its way back to Jenin. This allowed the two Israeli mechanized task forces to link up again and assault Jenin from the south. Meanwhile, the Israeli infantry brigade had pushed south beyond the town, at which point it then wheeled northwest and attacked the town from the rear. General Peled had his two brigades conduct a simultaneous assault on the town. The Jordanian defenders fought back and their infantry units gave the Israelis real fits, but the complement of Pattons in the town were quickly dispatched by the Israeli Super-Shermans. As a result, in less than 30 minutes the Israelis had effectively taken the city. Just then, like the cavalry in a Western, the main body of the 40th Armored Brigade arrived south of Jenin.<sup>108</sup>

### *The Battle of Qabatiyah Crossroads*

The commander of the 40th Armored Brigade, Brigadier General Rakan al-Jazi, had been urging his men on all day so as to be able to counterattack the Israelis before they had penetrated too deeply into the West Bank. Counterattacking an Israeli offensive against Jenin had been al-Jazi's primary mission at the start of the war, his men had practiced and planned for it constantly, and he was determined to make it work. As the 40th Brigade drove back north on 5 June after its pointless detour down to Jericho, al-Jazi detached two companies of tanks which, along with a company task force from the 12th Independent Armored Battalion, were to establish a blocking position on the Jenin-Tubas

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<sup>106</sup> Hammel, pp. 365-368; Hussein of Jordan, p. 78; Mutawi, pp. 136-137.

<sup>107</sup> Dupuy, pp. 309-310; El-Edroos, p. 386; Hammel, pp. 366-367; Herzog, *The Arab-Israeli Wars*, pp. 178-179; Israel Ministry of Defense, p. 103; Mutawi, p. 137; O'Ballance, *The Third Arab-Israeli War*, p. 202.

<sup>108</sup> Dupuy, pp. 309-310; El-Edroos, pp. 384-385; Hammel, pp. 368-369; Herzog, *The Arab-Israeli Wars*, pp. 178-179; Mutawi, p. 137.

road while the main body of the 40th Armored Brigade continued on to Jenin.<sup>109</sup>

The main body of the Jordanian 40th Armored Brigade first encountered the reconnaissance company of the Israeli mechanized brigade. This force of AMX-13s, jeeps and half-tracks had been ordered to move south of Jenin and take up a position at the Qabatiyah crossroads where the Jenin-Nablus and Jenin-Tubas roads met. Brigadier al-Jazi sent part of his force directly against the Israeli unit and had another element loop around the Israelis through the hills to the east to flank the Israeli positions. The Israelis were outnumbered, outgunned by the Jordanian M-48s, and outflanked. They lost a number of vehicles but were able to retreat back into a good defensive position where they were able to hold the Jordanians at bay. Again al-Jazi divided his force, leaving part to finish off the Israeli reconnaissance company and taking the main body north against Jenin. However, General Peled was aware of what was happening to the south, and he dispatched the Super Sherman battalion of his mechanized brigade to aid the reconnaissance company. Hearing the sounds of battle from the south and seeing the Israeli armor quickly depart, the remaining Jordanian units in Jenin rallied and counterattacked. Although this was not much of a threat, it kept the Israeli infantry tied down in Jenin and prevented them from aiding their tanks.<sup>110</sup>

Brigadier al-Jazi learned from his scouts of the approach of the Israeli armor and ordered his force into hull-down positions along a ridge overlooking the road. The Israeli Super Shermans were low on fuel and ammunition but were nonetheless determined to reach their trapped comrades in the reconnaissance company. They came barreling down the road only to be hit full force by 50-60 Jordanian Pattons. In the battle that followed the Israelis lost 17 Super Shermans while knocking out only a handful of Pattons. The Shermans began to pull back and al-Jazi ordered his forces to go after the Israelis and finish them off, but the Israelis called in artillery that kept the Jordanians pinned to the ridge and allowed the Israelis to pull back and regroup. The Super Shermans tried another thrust down the road but were again mauled by the Jordanians, and again had to call in artillery to prevent the Jordanians from pursuing them. Late in the afternoon, the Israelis arranged for airstrikes against the main force of the 40th Armored Brigade. These attacks did not kill many Jordanian tanks, but it kept them pinned and allowed a force of Super Shermans to get around al-Jazi's position and fight its way down to where the reconnaissance force was still holding out. The Israelis surprised the Jordanian force there and were able to get the remnants of the reconnaissance company out before falling back on Jenin.<sup>111</sup>

Early the next morning, 7 June, the Israelis resumed their attack on the Jordanians around Qabatiyah crossroads.<sup>112</sup> Under heavy airstrikes, the Israelis employed part of the remnants of their mechanized brigade in a holding attack to pin the Jordanian armor to the ridgeline, while another force, mostly from the Israeli infantry brigade, swung around the Jordanian positions to the southwest and then back northeast to take them in the flank. In the daylight, the Israeli airstrikes began to inflict heavier casualties on the Jordanians than they had the night before. In addition, al-Jazi's flank guard detected the Israeli outflanking maneuver and he decided to fall back. When the Jordanian's pulled out of

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<sup>109</sup> El-Edroos, pp. 385-386, 388; Hammel, pp. 368-370, 373-374, 379-381; Mutawi, pp. 137-138.

<sup>110</sup> Dupuy, pp. 310-311; El-Edroos, p. 387; Hammel, pp. 368-369; Herzog, *The Arab-Israeli Wars*, p. 179; O'Ballance, *The Third Arab-Israeli War*, pp. 203-207.

<sup>111</sup> Dupuy, pp. 310-311; El-Edroos, pp. 387-388; Hammel, pp. 369-371; Israel Ministry of Defense, p. 104; O'Ballance, *The Third Arab-Israeli War*, pp. 203-207.

<sup>112</sup> King Hussein had already ordered a withdrawal and countermanded it at this point. While this caused some severe confusion among other Jordanian units, Brigadier al-Jazi apparently considered the announcements so vague that they were open to interpretation and his interpretation was to remain in place and keep fighting. Thus alone among Jordanian formations, the 40th Armored Brigade kept on fighting long after the rest of the Jordanian army had collapsed. See, Dupuy, pp. 310-311; Hammel, pp. 374-378; Mutawi, pp. 136-138.

their dug-in positions and began to retreat, the Israeli armor attacked, and Israeli airstrikes were able to catch many Jordanian tanks in the open. Under the combined air and armor attacks the 40th took heavy casualties and fell apart, with squads and platoons fleeing down the Nablus-Tubas road as best they could. The 40th seems to have lost about half its effective armor strength in the retreat from Qabatiyah crossroads.<sup>113</sup>

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<sup>113</sup> Dupuy, pp. 310-311; El-Edroos, pp. 386-388; Hammel, p. 381; Herzog, *The Arab-Israeli Wars*, p. 179; Israel Ministry of Defense, p. 112; Mutawi, p. 137; O'Ballance, *The Third Arab-Israeli War*, pp. 203-207. This is essentially Dupuy's version of the *denouement* of the Battle of Qabatiyah crossroads.

Unfortunately none of the accounts of the battle agree on why the Israelis eventually were able to get through the Jordanian positions on the morning of 7 June. However, Dupuy's account strikes me as the most likely. Herzog's account is vague but conforms broadly to Dupuy's version. The account in the official Israeli history also squares largely with Dupuy's account of the battle, but I have not relied heavily on this source because of its obvious biases. By contrast, the Jordanian accounts (Mutawi and the various stories in El-Edroos) state that the 40th was virtually obliterated by the IAF in place on the ridgeline, and the Israeli ground forces simply swept its remnants off the ridge after the battle was essentially over.

I have several reasons for disregarding the Jordanian version. First, as noted previously, the Jordanian accounts of the Six-Day War blame virtually every setback on the IAF, no matter how minor. However, in many of these cases, the Jordanian accounts are gross exaggerations or outright fabrications. While the IAF certainly contributed very significantly to the Israeli conquest of the West Bank, the Jordanian sources frequently claim that Jordanian defeats were the result of Israeli airstrikes when other, more reliable accounts make it clear that no such airstrikes took place. Second, while it is clear that the IAF was a major factor in the Israeli victory at Qabatiyah crossroads, the speed of the final Israeli victory suggests that airpower was not the only element of Jordan's defeat. The Israelis allowed only 15-30 minutes (accounts vary) for air strikes prior to their armored attack at dawn on 7 June. Even if the entire Israeli Air Force had participated in the attack, it is almost inconceivable that 100-150 Jordanian armored vehicles camouflaged and dug in along a wooded, rocky ridgeline could have been destroyed by the IAF *in the dark* in just a half-hour. Against exposed Jordanian columns moving during the day along the narrow roads of the Judean hills and unable to flee or hide, Israeli airstrikes appear to have achieved an armored vehicle kill per sortie ratio of no better than .5 (and probably closer to .3). It is extremely unlikely that the IAF could have achieved a similar ratio against the 40th Armored Brigade in their positions at Qabatiyah crossroads. For the sake of argument, however, let us assume the IAF achieved a kill per sortie ratio of .5 and that it only killed 70 Jordanian tanks and APCs causing the rest to flee. To accomplish this, the Israelis would have had to have flown 140 attack sorties just against Qabatiyah crossroads. Because half an hour is too short a time even for Israeli jets to conduct an attack on dug-in armor, return to base, refuel and rearm, return to the battlefield and conduct another strike, the Israelis would have had to have committed 140 aircraft to this mission. The entire IAF at the start of the war was only 200 aircraft, and by 7 June it was down to about 160-170 operational aircraft. One would expect that if the Israelis had pulled all of their aircraft off other missions to make a massive attack on Qabatiyah crossroads someone might have mentioned it, but none of the accounts of the Six-Day War or the histories of the IAF do. Instead, by all accounts, the air effort against Qabatiyah, while significant, did not necessarily receive more attention than the constant Israeli air effort against Jordanian forces retreating from the West Bank or those against the Egyptian army retreating from Sinai. Of course, if a more realistic kill per sortie ratio were used, the number of sorties required would increase accordingly, indicating it would have been impossible for the Israelis to have inflicted even close to the amount of damage claimed by the Jordanians in the time available. Consequently, I believe Dupuy's account of heavy airstrikes coupled with a flanking maneuver seems to fit the facts much better than the Jordanian versions.

Finally, according to Hammel, the Jordanians withdrew during the night--*before the Israeli attack*--as part of the King's order to fall back from the West Bank. However, this version of events strikes me as even less likely than the Jordanian version. First, it does not fit al-Jazi's personality profile: as far as we know, the only withdrawal orders the 40th was issued were the King's general announcement during the afternoon of 6 June, which he then countermanded. Al-Jazi clearly disregarded these orders and kept fighting the Israelis. This being the case, why would such a determined soldier as al-Jazi suddenly decide to obey them in the middle of the night? (Hammel himself notes al-Jazi's exceptional aggressiveness and bellicosity on pp. 375, 379). Second, the Jordanian sources agree that al-Jazi did not voluntarily withdraw. Not only is there no reason for them to lie about this, there is every reason for them to have said so if it were true. That is, Jordanian authors are most concerned with preserving the image of Jordanian military prowess, thus a voluntary withdrawal would have suited their objective even better than their claim that the

### *The Jenin-Tubas Road*

As planned, during the night of 5 June, Peled's armored brigade struck out through the hills east of Jenin and reached the Jenin-Tubas road well south of Jenin.<sup>114</sup> Remarkably, the Israeli armor hit the road only a short while after the main body of the Jordanian 40th Armored Brigade had passed heading north. The Israelis, however, turned south and headed for Tubas, and Nablus beyond it. North of Tubas, the Israelis ran into a Jordanian anti-tank ambush, which inflicted some damage on the Israeli reconnaissance force probing ahead of the main column. The Jordanians failed to retreat once their ambush was tripped so the Israelis pinned them with artillery, called in airstrikes and worked a combined force of tanks and dismounted infantry around the Jordanian flank. The Jordanians were quickly routed by this deft operation. Shortly thereafter, the Israelis ran into the battalion task-force from 40th Armored Brigade and 12th Armored Battalion which al-Jazi had ordered to guard the Jenin-Tubas road. The Jordanians had found a superb blocking position where the road passed between dominating heights that prevented any off-road movement. Unable to mount a flanking attack, the Israeli armor attempted a frontal assault. The Jordanians were well camouflaged and dug-in on the hills overlooking the road and their Pattons got the best of the Israeli Centurions. However, because of the superior armor of the Centurions, the Jordanians destroyed only three of the Israeli tanks. The Israelis fell back to regroup and then tried again late in the day, this time with air support. The airstrikes did little damage to the Jordanian tanks and again, the Pattons beat back the Israeli charge with some losses.<sup>115</sup>

The Israeli commander recognized that he was never going to bull his way through the Jordanian roadblock: the terrain was too difficult and the Jordanians were not going to be scared off. So instead he waited until 0100 hours on 7 June and then made a sudden rush with his Centurions while his artillery battalion opened up on the Jordanian positions simultaneously. As the Israelis had hoped, many of the Jordanian crewmen were asleep and were jolted by the sudden onslaught. Some of the crews fled, while others had difficulty reacting to the sudden Israeli assault, allowing the lead Centurions to get in among the Pattons and bust them up. Surprised, disoriented, and with the Israelis seemingly all around them, the Jordanians mostly fled. The few tanks and infantry units that remained were quickly dispatched by the Israelis. After regrouping on the objective, the Israelis set out in pursuit of the fleeing Jordanians, but the superior road speed of the Patton over the Centurion allowed the Jordanians to increase the gap between them and their pursuers. Close to dawn, however, the Israeli Air Force caught the Jordanian units fleeing down the Tubas-Nablus road and destroyed many of the Pattons on the road.<sup>116</sup>

The Jordanians made their last stand in Nablus. There, elements of the 12th Armored battalion, the 40th Armored Brigade and tanks and infantry from various other formations throughout the West Bank gathered after having lost their original positions or having had their parent formations scattered by air attacks. The Jordanians established a blocking position east of Nablus to guard the way into the Jordan valley and the Damiyah and Allenby bridges. The Israelis took Nablus unopposed, and then sent the

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40th was destroyed by airstrikes, the version they do prefer. Finally, if the 40th retreated voluntarily before the Israeli attack, it should have been cohesive and close to full-strength later in the day. Instead, throughout 7 June, Israeli ground and air forces encountered only scattered elements of the 40th, most of which were demoralized and exhausted, indicating that the brigade had been mauled and dispersed that morning.

<sup>114</sup> In fact, the Israeli armored brigade was understrength, having left its battalion of Super Shermans in the Upper Galilee to deal with any Syrian move. Thus the brigade attacked Jordan only with its battalion of Centurions, its mechanized infantry battalion, and the AMX-13s of its reconnaissance company.

<sup>115</sup> Dupuy, pp. 311-312; El Edroos, p. 388; Hammel, pp. 373-374, Herzog, *The Arab-Israeli Wars*, p. 179.

<sup>116</sup> Dupuy, pp. 312-313; El-Edroos, pp. 388-389; Hammel, pp. 379-380; According to Hammel, 16 of about 40 Pattons in this force were destroyed by the Centurions while another 19 were destroyed by Israeli airstrikes all along the road.

reconnaissance company of Peled's armored brigade east to scout the descent to the Jordan. There the AMX-13s of the Israeli reconnaissance force ran into the Jordanian blocking force with about 25 Pattons. Seeing that he had a huge advantage in numbers and equipment, the Jordanian commander attacked. The Israelis did not panic or run, but coolly took up hull-down positions from which they were able to hold back the Pattons, and then called in airstrikes. The IAF arrived quickly and routed the Jordanians, who were exhausted and demoralized from their previous battles. The Israeli light tanks gave chase and were able to get excellent shots on the vulnerable rears of the Pattons as they retreated. Between the air strikes and the tank fire, nearly the entire Jordanian force was obliterated.<sup>117</sup>

### **The Jordanians Retreat**

As early as the afternoon of 6 June the situation looked bleak in Amman. The Jordanian Air Force lay in ruins. Latrun had fallen quickly and easily. The 1st "Princess Aliyah" Infantry Brigade holding Qalqilyah and Tulkarm had collapsed when it was attacked earlier that day by an Israeli infantry brigade. In Jerusalem, Ammunition Hill, Shaykh Jarrah, and Mivtar Hill had all fallen to Israeli armor and paratroopers, while in the southern part of the city, Abu Tor and Mt. Zion had been captured by the Etzioni Brigade. The Old City was nearly surrounded and its only link to the Jordanian rear was east over the Augusta Victoria ridge to the Jericho road. Jenin had fallen, and only the 40th Armored Brigade dug-in at Qabatiyah crossroads was having any success in holding back the Israelis. Moreover, Israeli airpower was making a coordinated defense of the West Bank impossible. Israeli aircraft roamed across the Jordan valley destroying military traffic on both sides of the river. The IAF had blocked and decimated elements of the 27th Infantry Brigade as well as a battalion of the 60th Armored Brigade as they had moved to reinforce Jerusalem. Likewise, the IAF had beaten up the 6th "Qadisiyah" Infantry Brigade as it moved south toward Jerusalem. Thus while the Jerusalem-Jericho road was still in Jordanian hands, in effect, it had been cut by Israeli air power.

The Jordanian General Staff in Amman believed the situation was far worse than was actually the case because of exaggerations and misreporting by their tactical commanders in the field.<sup>118</sup> Almost across the board, Jordanian commanders exaggerated the size of the Israeli forces that were attacking them, the size and number of airstrikes they were facing, and the losses they were taking. No less an authority than Samir Mutawi observed that:

Another element that helped create this sense of defeat were the exaggerated reports sent to the GHQ by Jordanian commanders at the front. These emphasized the tremendous losses the Jordanians were sustaining and the odds against which they fought. This resulted in an inflated assessment of Jordanian losses and was one of the factors which led the GHQ command to conclude that they stood no chance of maintaining control of the area and that they faced the stark choice of putting up a hopeless defence or a retreat in which no more lives would be lost than necessary.<sup>119</sup>

Based on these reports the Jordanian high command had begun to believe as early as the evening of 5 June that the West Bank was lost. Indeed, reports from Jordanian field commanders were so alarmist that the General Staff concluded the Legion was losing

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<sup>117</sup> Dupuy, pp. 313-314; Hammel, pp. 380-381; Hussein of Jordan, pp. 80-81.

<sup>118</sup> It is also highly likely that Israeli electronic warfare operations also were feeding disinformation into the Jordanian intelligence system, adding to the confusion and unreality of Jordanian decision-making.

<sup>119</sup> Mutawi, p. 138.

forces at the rate of one tank every ten minutes.<sup>120</sup>

Neither was help from other Arab states forthcoming. Before the beginning of the conflict, Jordan had been promised reinforcements from Egypt, Syria, Saudi Arabia and Iraq in the event of war. The Egyptians had sent only two commando battalions that tried to infiltrate into Israel to sabotage roads, airports and military facilities, but their attacks fizzled and they were nearly all rounded up by the Israelis. Iraq had dispatched the 8th Motorized Infantry Brigade, probably as the vanguard of a larger force, but the IAF had caught it on the open road in eastern Jordan and had hammered it for most of an afternoon. The Saudi brigade was late in arriving, and from Syria there was nothing except encouragement.<sup>121</sup>

The straw that broke the camel's back for the Jordanians was the final realization during the afternoon of 6 June that the Egyptian military had been destroyed and therefore no help could be expected from that quarter. The King and Riyadh then agreed to order a general retreat from the West Bank to try regroup their forces on the east side of the Jordan and mount a defense of Amman. The King issued this retreat order around 2200 hours on 6 June. However, within minutes, the United Nations issued its own call for a ceasefire. The King reasoned that a ceasefire would be observed along the lines of currently occupied territory, therefore he ordered General Riyadh to rescind the retreat order, and instead order Jordanian troops to return to their positions and hang on until the ceasefire took effect. The Israelis had no interest in a ceasefire and ignored it. This proved to be the nail in the coffin for Jordan's defense of the West Bank. Some Jordanian units did not receive the countermanding order at all. Others had long since been routed by the Israelis and were already fleeing back to the Jordan-river bridges. A number of other Legion units, however, had begun to retreat only to be told to return to their positions an hour or two later. By that point the Israelis had occupied most of their lines and several Jordanian units were badly bloodied launching frontal assaults against the Israelis to try to retake their defensive positions.<sup>122</sup>

By the morning of 7 June, the West Bank was lost. Jordanian units were in full retreat everywhere as a result either of defeat at the hands of the Israelis or the King's announcement. The only exceptions were the various units in northern Samaria under Brigadier al-Jazi's control, which were only defeated and destroyed by Israeli armor and air forces later that day. Jordanian units streamed down to the Damiyah and Allenby bridges with Israeli units close on their heels. In addition, the IAF constantly hammered away at the retreating units. Some Legion units, such as the remnants of the 3rd Brigade in Jerusalem, retreated very skillfully, while others, such as the 1st and 29th Infantry Brigades and the 10th Independent Armored Brigade, fell all over themselves and abandoned much of their heavy weapons in a mad dash to get to the East Bank. At noon the King ordered a complete, unequivocal withdrawal of all Jordanian forces from the West Bank. Finally at 2000, the King agreed to a UN-sponsored ceasefire which Tel Aviv also accepted.<sup>123</sup>

In the final accounting, the Jordanians lost heavily, but the Israelis did not go unscathed in their victory. Jordan suffered 6-7,000 soldiers killed and probably another 12-20,000 wounded. In addition, Amman lost at least 200 tanks--at least 50 of which were simply abandoned during the retreat--and at least 150 artillery pieces. The Israelis had 302 men killed and 1,453 wounded, and lost about 100 tanks--although unlike the

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<sup>120</sup> Mutawi, pp. 155, 158. Also see Hussein of Jordan, pp. 81, 89. On 7 June, the commander of the 60th Armored Brigade reported that he had only 6 tanks left because of Israeli airstrikes when in fact he had almost a battalion's worth of tanks remaining despite losses from combat with Israeli armor, mechanical breakdowns, and airstrikes. Compare Hussein of Jordan, p. 89 with Hammel, p. 383.

<sup>121</sup> El-Edroos, p. 396; Hussein of Jordan, p. 78; Mutawi, p. 136.

<sup>122</sup> Hammel, pp. 374-376; Hussein of Jordan, pp. 81-97; Mutawi, pp. 138-139.

<sup>123</sup> Dupuy, pp. 304-305; El-Edroos, pp. 386; Hammel, pp. 374-375, 382-383; Moskin, p. 351; Mutawi, 139-140.

Jordanians, the Israelis were able to repair many of these and return them to battle.<sup>124</sup>

### **General Observations on Jordanian Military Effectiveness During the Six-Day War**

The Jordan Arab Army probably fought best of all the Arab armies that participated in the Six-Day War, but not by much. Despite a rough 1:1 balance of forces in manpower and equipment, the Jordanians still suffered more than ten times the casualties as the Israelis. In general, Jordanian combat performance was uneven, perhaps even odd. A handful of Jordanian units fought extremely well, while the vast majority fought poorly. In addition, there were some aspects of military operations the entire army did poorly as well as categories in which the entire army did well.

The comparison with Jordanian performance in 1948 is rather striking. At one level there were important differences between the wars in 1948 and 1967 that mitigate the extent of the failure in 1967. In particular, Israel did not have undisputed air superiority and an extremely capable air force in 1948. However, there are an equal number of factors that were essentially equivalent in both wars, and other differences that should have aided the Jordanians in 1967. The numerical balance was about even in both wars, and if anything, Israel's numerical superiority was greater in 1948 than in 1967. Jordan was able to defend the excellent defensive terrain of the West Bank in both wars. Israel was forced to divide its troops among several fronts in both conflicts, but in 1967 the Sinai was clearly Israel's highest priority, while in 1948 the Arab Legion was probably considered Israel's greatest opponent and therefore commanded the lion's share of Israeli assets. The quality of equipment on the two sides still favored Jordan in 1967, perhaps to a lesser extent than in 1948, but even in 1948 the gap in arsenals was not so great as to have been decisive.

Weighing all of these factors, it is clear that Jordanian forces performed significantly worse in 1967 than in 1948. In the Six-Day war, Jordanian generalship was probably adequate, but at a tactical level, only a few Jordanian units were even in the same league as the Israelis. Ultimately, in 1948 a small British colonial army defending excellent terrain succeeded in holding off the attacks of a poorly-trained, poorly-armed, and poorly organized militia army for months. In 1967, when that same army, in the same terrain but without its British officers, met a well-trained, adequately-armed, and well-organized professional army, they were blown away in less than three days.

### *Strategic Performance*

Jordanian strategic leadership was decent in most areas, but suffered from a few crucial flaws. Jordan's plan for the defense of the West Bank had some strengths and some weaknesses, but the pluses probably outnumbered the minuses. On the positive side, Amman presciently recognized it probably could not hold the whole West Bank against a major Israeli offensive. The idea of trading off West Jerusalem for any Israeli gains was at least a reasonable approach, and Operation Tariq--the plan to effect that strategy--appears plausible on paper. More important than this, however, the Jordanian General Staff correctly anticipated the broad outlines of what an Israeli invasion would look like, allowing them to plan against this blueprint. Consequently, Jordanian forces were mostly very well deployed given Israel's actual strategy.

Of course, there is also a liability side to the ledger on Jordan's prewar planning. With the exception of Jerusalem and the adjacent corridor, the Jordanians had not bothered to build fixed fortifications across key axes of advance. To throw up one's hands and claim that there were too many of them--as the Jordanians apparently did--is not only irresponsible, but wrong.<sup>125</sup> If the general staff could identify the likely Israeli

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<sup>124</sup> Cordesman, *Jordanian Arms*, p. 38; Dupuy, pp. 315, 333; Hammel, p. 383; Hussein of Jordan, p. 88; Young, p. 166.

<sup>125</sup> El Edroos, pp. 360-367.



attack corridors and deploy forces there, why not fortify them as well? Moreover, in some places, the fortifications the Jordanians did build were haphazard and did not prove to be very formidable, suggesting a lack of attention on the part of the Jordanian high command.<sup>126</sup> Although it is unfair to hold the general staff responsible for the decision to employ a forward defense of the entire perimeter of the West Bank because this was a political decision, even within this framework some of Jordan's deployments were questionable and led to problems during the war. In particular, since the 27th Infantry Brigade was intended to be used in Operation Tariq--which was supposed to kick off before Israel could attack--why not station the brigade closer to Jerusalem? By stationing it near Jericho, Amman had to get the brigade moving early, and left it vulnerable to Israeli air interdiction which was exactly what happened: when the 27th Infantry Brigade was ordered to reinforce Jerusalem it was battered by airstrikes and elements never reached the city. Such problems would have been eliminated by garrisoning it there from the start. Nor was there another mission for which the brigade would have been better deployed in reserve: it was to participate in Operation Tariq or else defend Jerusalem if the Israelis were able to attack first. Finally, one must add that Jordanian Air Force planning for war with Israel was inexcusable. Intelligence and targeting information for the raids the RJAF conducted on 5 June was non-existent, and no attempt was made to disperse Jordanian planes, suggesting Amman's air force commanders had never made any serious effort to plan for a war with Israel.<sup>127</sup>

It is hard to make a judgment one way or another regarding the strategic direction of Jordanian operations during the course of the fighting itself, although the common wisdom is that it was very poor. In particular, many commentators, particularly Jordanian military officers criticize the decision to redeploy the two armored brigades at the beginning of the war. I am not convinced that this was such a mistake. The problem is that the Jordanians had only one force in place and capable of executing Operation Tariq--the 60th Armored Brigade--which also was the only unit that could mount a rapid advance into the Negev to link up with an Egyptian advance. With twenty-twenty hindsight, we know that there was no Egyptian drive into Israel, thus executing Operation Tariq would have been the better move for the Jordanians. However, no one in Amman knew that at the time and there was no real reason to suspect it was untrue. The Egyptian army was very large and was considered very formidable, and it was reasonable at the time to believe it could have repulsed the Israeli attack and then mounted a counteroffensive into the Negev.

This being the case, the real question is whether the Jordanians should have executed Operation Tariq and left the Egyptians to fend for themselves, or sacrificed their own plans in an attempt to win a more convincing victory in conjunction with the Egyptians. I see this as a toss-up. Operation Tariq essentially was a "go-it-alone" strategy, in which Jordan attempted to solve its own strategic problems in the belief that it would get no outside help. Clearly, seizing West Jerusalem in the hope they could trade it for whatever the Israelis conquered was not an ideal strategy and the Jordanians only decided on it because they believed they could not prevent the Israelis from making some gains. If there had been an Egyptian drive into Sinai, it seems very reasonable for the Jordanians to have jettisoned Operation Tariq and instead bet on a war-winning strategy by cooperating with Egypt. Had there been an Egyptian invasion and had Jordan contributed a drive southwest from Bethlehem to complement it, the Arabs might have put Israeli in an extremely tight situation, and might have defeated the IDF altogether. This seems ludicrous to think now, but it was not ludicrous to believe on 5 June 1967. Ultimately, I find it hard to judge between the two options, and so I cannot necessarily find fault with the decision to commit 60th Armored Brigade to the Negev attack.

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<sup>126</sup> Mutawi, p. 166.

<sup>127</sup> Husayn of Jordan, pp. 66-67.

Once Amman had decided to redeploy the two armored brigades to aid the mythical Egyptian offensive, most of Amman's moves are quite good. Thereafter, most of the actions the GHQ ordered were designed to block the major Israeli thrusts against Jerusalem and Jenin. First they ordered the attacks on Jebel Mukhaber and Mt. Scopus to improve the Legion's tactical position within the city. When it became clear that the Egyptian drive into the Negev was a lie, they ordered both armored brigades to return to their positions in reserve. When the Israeli attack began, they ordered the 60th Armored Brigade and the 27th Infantry Brigade to reinforce Jerusalem. Specifically, to counter the Israeli attacks both south (at Jebel Mukhaber, really an Israeli counterattack) and north (the Jerusalem corridor) of Jerusalem, they ordered the 60th Armored brigade to detach a battalion to aid the units south of the city while the main body hit the Israeli mechanized force north of the city. After that, the GHQ tried to move the 6th Infantry Brigade south from northern Samaria to reinforce Jerusalem. When it became clear that the absence of a division-level command was hindering the defense of Jerusalem, they made Brigadier Haza'ah overall commander of all units in and around the city. When the Israelis attacked Jenin they ordered the 40th Armored Brigade to counterattack and block or seal the breach. Finally, when the defense of the West Bank clearly was doomed, they ordered a retreat to the East Bank. In every one of these decisions, Amman made a reasonable, or even a very good, move.

The problem was that these orders usually came just a bit too late. Overall, the Jordanian high command mostly reacted to Israeli moves, and often reacted too late, rather than anticipating them. As a result, Jordanian reinforcements always arrived, if they arrived, *after* the crucial issue had already been decided. In general, Jordan's command and control system proved slow and inflexible and could not keep pace with the rapidity of the Israeli thrusts.<sup>128</sup> In addition, there were several actions taken by the General Staff during the war that should have been made before the outbreak of fighting. In particular, divisional formations should have been established prior to the outbreak of war. If the King was afraid of permanent division commanders, then why not have provisional ones, ordered to coordinate operations only in wartime? Also, the preparatory moves for Operation Tariq should have begun on 3 or 4 June when Jordan received warning of the imminent Israeli attack on Egypt. This was pure negligence on the part of Amman: it cannot be argued that the Jordanians were trying to avoid provoking Israel because the King himself believed war was inevitable and intended to go on the offensive against the Israelis *even if they did not attack him*. In addition, in the preceding weeks the Jordanians had already redeployed four brigades to the West Bank in anticipation of the war with Israel, and redeploying two from Jericho to Jerusalem would have been far less provocative than this substantial reinforcement.

Of course, the Jordanian high command cannot take all the blame for this sluggishness. A big part of the problem was the inadequacy and inaccuracy of the information available to them. Jordanian intelligence had done an extremely poor job before the war gaining information on Israel's order of battle, military facilities, doctrine, and concept of operations.<sup>129</sup> In addition, Between the utter lies passed on by the Egyptians, disinformation from Israeli electronic warfare operations, and the barrage of obfuscation and deception from Amman's field commanders, Amman never really understood its situation until it was too late. For the most part, Amman fought the war in a fog created by this constant manipulation of information, and only occasionally got a glimpse of reality when one of its own sources could observe part of the battlefield, or on those rare instances when a field commander actually sent back an objective report. Finally, Amman also suffered from its inefficient command and control system. Because the Western Front commander had direct responsibility for nine brigades and 3-4

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<sup>128</sup> For a concurring opinion, see El-Edroos, p. 366.

<sup>129</sup> See for instance Husayn of Jordan, pp. 66-67, 106.

independent battalions plus all of the support assets on the West Bank, his staff was overburdened with reports and requests for orders. Consequently, it was often the case that he and his staff had to neglect one sector to deal with another problem, only to create a problem in the first sector because of their inattention.<sup>130</sup>

One last issue that needs to be addressed regarding Jordanian strategic leadership is the role of General Riyad. Many Jordanians and apologists for the Jordanians have made General Riyad the scapegoat for the entire war.<sup>131</sup> They claim that he was incompetent and rigid in his thinking, that he disregarded the advice of the Jordanian high command, that he failed to have the King approve his actions, and that he slavishly followed the orders of General Amer in Cairo who had no idea what was happening on the West Bank and only cared about Egypt. As far as I can tell, only the last point regarding Amer's priorities is a valid criticism. First, all Egyptian, Western and Israeli appraisals of General Riyad give him extremely high marks, and the changes Riyad set in motion when he was made Chief of Staff of the Egyptian Armed Forces after the Six-Day War were excellent and laid the groundwork for Egypt's success in the canal-crossing operation of October 1973.<sup>132</sup> General Yitzhak Rabin, Chief of Staff of the IDF during the Six-Day War said of Riyad, "he was very good, one of the best the Egyptians had."<sup>133</sup> Second, both Trevor Dupuy and King Hussein argue that while Riyad had final say in most strategic debates, he did not ignore the advice of the Jordanian generals.<sup>134</sup> Indeed, based on his interviews in Jordan after the war, Dupuy contends that it was Riyad who was "out of the loop" and that the Jordanian hierarchy functioned as before, "with only perfunctory consultation with the Egyptian General."<sup>135</sup> According to King Hussein himself, Riyad conferred with him on all major decisions, and there is no instance when any author has been able to point to a decision regarding Jordanian actions during the war with which the King disagreed.<sup>136</sup> Whether it was Riyad who made the decisions or the Jordanian generals as Dupuy concludes, the King approved every decision made: in his words: "It's quite true that I was present at all Riad's (sic) decisions. I even helped with some of them. Riad wanted my approval of those he considered most important."<sup>137</sup>

While it may have been the case that Riyad paid more attention to Cairo than his Jordanian subordinates did, this is not necessarily a fault. Riyad was sent to Amman as the eastern front commander of the UAC, in other words his brief was specifically to ensure the coordination of the Arab forces, and whether he put Egypt first or not, he seems to have done this. As noted above, his decision to send 60th Armored Brigade south--the one decision that seems to have most angered Jordan's generals--might have been the best move for all of the Arab states had it been the case that the Egyptian army was driving into the Negev as Amer claimed, and Riyad had no reason to believe that Amer was deliberately lying to him. Had it been the case that the Egyptian army really was driving into the Negev then sticking to the "Jordan first" strategy embodied in Operation Tariq might have allowed Israel to scrape together enough forces to defeat the Egyptians and then turn on the Jordanians. In such a scenario the Egyptians would be chastising the Jordanians for losing the war for the entire Arab cause and the Egyptians would be correct. Again, the point is that Riyad's decision was an entirely reasonable

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<sup>130</sup> Mutawi, pp. 123, 138, 144, 157.

<sup>131</sup> See for example, El-Edroos, p. 409; Mutawi, pp. 143-147; Lunt, p. 95; Young, p. 140. Also see the interview with Jordanian Prime Minister Wasfi at-Tell contained in Hussein of Jordan, pp. 128-129.

<sup>132</sup> Heikal, *The Road to Ramadan*, p. 42; Hussein of Jordan, pp. 54, 106-108; Gamasy, pp. 89-90, 108; Korn, p. 108; Moskin, pp. 50, 102; Narkiss, pp. 96-97; Rabinovich, p. 326.

<sup>133</sup> Quoted in Moskin, p. 50.

<sup>134</sup> Narkiss, pp. 96-97.

<sup>135</sup> Dupuy, p. 235.

<sup>136</sup> Hussein of Jordan, pp. 60-61, 63, 79, 81, 87-89, 106-108.

<sup>137</sup> Hussein of Jordan, p. 106.

move: it was an honest mistake, not an unconscionable blunder. While this decision clearly was detrimental to Jordan's fight against Israel, it was not necessarily a sign of incompetent generalship.

### *Tactical Performance*

The tactical proficiency of Jordanian forces showed a marked decline since 1948. Jordanian tactical performance, however, was not *uniformly* poor. There were some aspects of military operations in which the Jordanian armed forces continued to demonstrate a high degree of competence across the board. In addition, there were a small number of units that were reasonably effective in a large number of aspects of combat operations.

On the positive side, Jordanian forces continued to demonstrate first-rate soldiering skills. As individual soldiers and pilots the Jordanians remained quite good and generally did everything that could be expected of them. Jordanian soldiers were generally brave and well disciplined, despite certain important exceptions such as the panicky retreat of the Patton company of the 60th Armored Brigade at Tel al-Ful. Jordanian marksmanship was generally quite good, although there was variance: Jordanian infantry were superb with their small arms, while Jordanian tank and artillery crews were not quite as good with their weapons. Likewise, based on the very limited information available, Jordanian pilots seem to have been fairly proficient in handling their aircraft in air-to-air engagements, but did not demonstrate a high degree of accuracy in air-to-ground operations. Some Jordanian pilots were sent to Iraq and flew Iraqi Hunters during the war after their own were shot down. As at As Samu before the war, the Israelis felt that the Jordanian pilots were quite skillful in one-v.-one engagements.<sup>138</sup>

Jordanian unit cohesion ran the gamut. In some cases, Jordanian units hung together and continued to fight on in tremendously difficult, even hopeless, situations. The 40th Armored Brigade and the Jordanian infantry units defending Ammunition Hill, Mivtar Hill, Abu Tor, and Jenin, stand out in particular. On the other hand, a number of Jordanian formations fell apart after only slight pressure from the Israelis. For instance, the 1st and 2nd Infantry Brigades, defending Tulkarm-Qalqilyah and Latrun respectively, both collapsed and ran or surrendered *en masse* after the first attacks and long before their battles had been decided. Similarly some units, such as the 40th Armored Brigade, conducted a first-rate fighting withdrawal after Amman ordered a general retreat from the West Bank, while the 29th Infantry Brigade and the 10th Armored Battalion in Judea both fell apart and bolted, abandoning much of their heavy weaponry when they received the retreat order. Although in some cases Jordanian officers deserted their units, this did not correlate with poor unit cohesion: as many Jordanian units appear to have stuck together and fought on after their officers fled as disintegrated. While it is impossible to be certain, there appears to be some correlation between unit cohesion and whether the unit was Bedouin or hadari-manned. Both the 40th Armored Brigade and the 3rd Infantry Brigade were both Bedouin units and they showed excellent unit cohesion, while the 1st Infantry Brigade probably was hadari and it disintegrated with the first Israeli probes. Unfortunately, it is hard to push this correlation much further because little information exists as to the composition of other Jordanian brigades.

Jordanian tactical performance really fell down at the unit level. Once Jordanian formations got beyond squad or maybe platoon level, their problems suddenly became overwhelming. As Abraham Rabinovich observed:

The bravery of the Jordanian soldiers on Ammunition Hill and elsewhere along the city line would save Jordanian honor, but not the reputation of its arms. Bereft of its British officers and with its tough Bedouin core of

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<sup>138</sup> On Jordanian pilot performance in Iraq, see Cohen, pp. 218-219; Lunt, p. 98; O'Ballance, *The Third Arab-Israeli War*, p. 83.

regulars diluted with urban elements and reserves, the once-formidable Arab Legion had become an army much like the other Arab armies Israel knew. Fratkan's report to Gur from Nablus road that the enemy seemed incapable of executing even platoon movements summarized the situation in most sectors. Only in their deadly accurate mortar fire and in squad-level infantry encounters did the Jordanians prove effective.<sup>139</sup>

For the most part, these problems were failures in leadership. It wasn't necessarily that Jordanian soldiers could not work together, but that their officers had difficulty coordinating and competently directing the action of the forces under their command. Jordan's junior officers showed little or no imagination, adaptability, or initiative. The quintessential pattern of Jordanian combat performance was for a Jordanian unit to put up a hail of deadly fire against an Israeli frontal assault, but as soon as the Israelis had penetrated their lines and then began clearing their fortified positions, the Jordanians were incapable of responding. At best, the Jordanians organized small counterattacks that were launched much too late to make a difference, but for the most part, Jordanian officers failed to counterattack altogether. Instead, the Jordanians remained in their defensive positions, making no move to reorient their forces or otherwise adapt to the Israeli penetrations. Thus even at battles such as Ammunition Hill, the Jordanians butchered the Israeli paratroopers as they made their frontal assault against the Jordanian lines and continued to inflict casualties on the Israelis in hand-to-hand combat in the trenches, but could not stop the Israeli attack because they refused to shift their forces or counterattack to block or seal the Israeli penetration.

Jordanian forces experienced all sorts of problems whenever presented with unexpected situations or fluid battles. According to Samir Mutawi, Jordanian operations on the West Bank in 1967 were characterized by "confusion and panic." In large part, because the Jordanians were surprised by the speed and strength of the Israeli advances and were forced to try to conduct operations for which they were completely unprepared.<sup>140</sup> Combined arms coordination was fine as long as the Jordanians were defending set positions, but when the battle turned fluid, it broke down quickly. For example, in the Dotan valley, while the Israelis were attacking the Jordanian lines, their infantry, anti-tank teams, artillery and armor worked well together and stopped the Israelis cold. As soon as the Israelis feigned a retreat, however, the Pattons dashed off after them giving the Israeli Super Shermans the chance to butcher them and then deal with the Jordanian infantry without having to contend with Jordanian armor. Jordanian artillery support was unable to keep up with the rapid Israeli advance through the West Bank, and even in Jerusalem, where the Jordanians had had 19 years to pre-plan their fire missions, their artillery frequently could not provide timely support when the Israelis took unorthodox or unforeseen actions.<sup>141</sup> Jordanian armor performed adequately at best. Israeli Super Shermans and even Shermans consistently outfought Jordanian Pattons in battle. The 60th Armored Brigade should have demolished the Israeli 10th Mechanized Brigade but instead was outfought and driven off rather easily. Likewise, once the Israeli mechanized force near Jenin had pulled the 12th Armored Regiment tanks from their defensive positions and could engage them in a "fair" fight in the Dotan valley, the Israelis obliterated the Jordanian Pattons.

The one major exception to these patterns of tactical performance was the 40th Armored Brigade. This unit fought far better than any other Jordanian formation. Two qualifiers must be added to that statement, however. First, the 40th appears to have

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<sup>139</sup> Rabinovich, p. 324. Lt. Colonel Yosef Fratkan was the commander of the Israeli 28th Parachute Battalion of the 55th Parachute Brigade and Colonel Mordechai "Motta" Gur was his commanding officer.

<sup>140</sup> Mutawi, p. 151.

<sup>141</sup> Cordesman, *Jordanian Arms*, p. 83; Dupuy, pp. 287-315; Moskin, p. 251; Rabinovich, p. 172.

fought no better than average Israeli units, and probably somewhat worse. After all, at Qabatiyah crossroads they outnumbered the Israelis by at least 2:1, they had M-48s against the Israeli Super Shermans, and they were defending excellent terrain. The Israelis launched two frontal assaults and got plastered, which is actually what should have happened given the other advantages on the Jordanian side. On the Jenin-Tubas road, the 40th Armored Brigade elements were defending an almost impregnable position, again the Israelis conducted two frontal assaults, and in this case the Jordanians actually did very little damage to the Israelis, mostly because the Israeli force was about equal in tank strength to the Jordanian detachment (although the narrow roadway constrained their ability to employ their entire force) and the Israelis were using more heavily armored Centurions.

The second qualifier is that the 40th Armored Brigade was the exception that proved the rule. Brigadier al-Jazi was an exceptional officer: every Jordanian, Western, and Israeli account notes that he was head and shoulders above other Jordanian commanders in his aggressiveness and tactical skills. The 40th performed well when it was under his direct control. At Qabatiyah crossroads, the Jordanians used fire and maneuver to envelop the Israeli reconnaissance force. When this force had been cornered, they broke off the main body of the brigade and sent it north to deal with the major task, defending Jenin. They deployed an advance guard that warned them of the approaching Israeli tanks, and they quickly took up hull down positions on a wooded ridge perfectly sited to hold the road. When the Israelis attacked they beat them back and then attempted to pursue and finish off the fleeing Super Shermans only to be halted by Israeli artillery. Finally, when it was clear that they were being outflanked and their position was untenable, they retreated rather than be surrounded and destroyed. Compare this first rate performance to that turned in by the battalion of the 40th on the Tubas-Jenin road which allowed itself to be surprised by the Israelis at night and then was quickly outfought and driven off by the Israeli Centurions despite the strength of its position. Thus, without al-Jazi's direct control even units of the 40th Armored Brigade did poorly. The other Jordanian brigades, whose commanders were mediocre at best, could not even approach the 40th's performance.

### *Israeli Losses and Jordanian Prowess*

Many authors, both Jordanian and Israeli, have cited Israeli casualty figures as a means of demonstrating the clear superiority of the Arab Legion over other Arab armies during the Six-Day War. While the discussion above should make it clear that the Jordanians *were* better than other Arab armies in a number of important respects, this is not necessarily demonstrated by the casualty figures. Moreover, Jordan's proficiency over the other Arab states was not as great as the casualty figures suggest. Israeli losses on the Jordanian front primarily reflect the prevalence of infantry combat in built-up terrain in this theater, as well as some very questionable tactical decisions by the Israelis, rather than Jordanian skill.

During the Six-Day War, the Israelis suffered almost half of all their casualties fighting Jordan. The Israelis suffered 812 killed and 3,053 wounded during the war, of which 302 of the dead and 1,453 of the wounded fell against Jordan.<sup>142</sup> However, the vast majority of these losses came in the fighting in and around Jerusalem, where the

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<sup>142</sup> Hammel, pp. 279, 383, 424. Unfortunately, there is no agreement on casualty numbers. I have used Hammel's numbers as being the most recent and therefore probably the most accurate. The Israelis are scupulously honest about casualty numbers, reflecting the society's obsession with losses. Thus it seems likely that Hammel's numbers reflect the revised Israeli figures, which almost certainly are the most accurate. For comparison, Dupuy states that Israel lost 983 killed and 4,517 wounded, of which 553 killed and 2,442 came against Jordan. (Dupuy, p. 333). Herzog asserts that Israel had 764 dead in the war, of which 285 came against Jordan. (Herzog, p. 183).

Israelis had 195 killed and 1,131 wounded.<sup>143</sup> Jerusalem was bloody because of the frontal assaults the Israelis conducted against fortified Jordanian positions. These attacks were extremely costly. For example, at Ammunition Hill alone, one Israeli paratroop company of 80 men had 17 killed and 42 wounded while another company had 35 dead.<sup>144</sup> Conversely, in the battles elsewhere in the West Bank during 1967, Jordanian forces actually inflicted relatively few casualties on the Israelis.<sup>145</sup>

### *The Role of Israeli Air Power*

The Israeli Air Force probably had a greater impact on the Jordanian army during the Six-Day War than on any other Arab ground force at any other time. Israel conducted a massive air campaign against the Arab Legion, flying roughly 800 ground attack sorties against Amman's forces on both sides of the Jordan.<sup>146</sup> Nevertheless, the role of the IAF in the campaign has still been exaggerated. Many Jordanians have tended to blame their loss in 1967 almost solely on the destruction of the RJAF on 5 June. In Jordanian accounts of the war, the IAF has grown into a *deus ex machina*--sometimes even including broad hints that the Israelis were actively aided by the United States--thus absolving the Legion of all responsibility for defeat.<sup>147</sup> Jordanian sources frequently assert that Israeli airstrikes decided particular battles when Israeli and Western sources indicate that the IAF did not participate at all. For example, even Samir Mutawi, Jordan's most insightful and objective commentator on the war, claims that one reason the Israelis eventually prevailed at Ammunition Hill was because of airstrikes. However, Herzog and Narkiss both note that although Tel Aviv had wanted to employ airpower in this battle, Narkiss and Gur decided to launch the attack at night and so no IAF aircraft participated whatsoever.<sup>148</sup> There are many other instances of this phenomenon, particularly for the battles during the day on 5 June, when the IAF was so busy destroying the various Arab air forces that it conducted only 30 ground attack sorties anywhere, yet Jordanian sources claim their troops, "were subjected to [air] attack almost every time they moved."<sup>149</sup>

In fact, while the IAF made an important contribution to Israel's campaign on the West Bank, it was not the decisive factor in the conflict. Had the IAF not been able to participate in the campaign against Jordan, Israeli casualties would undoubtedly have been higher and it would have taken Israel longer to complete the operation, but the available evidence indicates the Israelis still would have won, and probably quite handily.

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<sup>143</sup> Hammel, p. 383. Rabinovich's numbers for comparison are 179 dead and 1,000 wounded. Rabinovich, p. 387.

<sup>144</sup> Hammel, pp. 329-334.

<sup>145</sup> Dupuy, 283-318; El Edroos, pp. 360-412; Herzog, p. 183; Metz, p. 237.

<sup>146</sup> O'Ballance, *The Third Arab-Israeli War*, pp. 220.

<sup>147</sup> See for example, El-Edroos, p. 269; Lunt, pp. 99-100; Mutawi, p. 142.

<sup>148</sup> Compare Mutawi, p. 133 with Narkiss, pp. 158-159, 164. Elsewhere, Mutawi argues that "Most Arab and Western commentators believe that Israeli air supremacy was the most important military factor which led to the defeat of the Arabs." (Mutawi, p. 128.) In the footnote to this statement, Mutawi cites two Arab authors and two Western authors, and one of the authors--Col. Trevor Dupuy--makes no such claim on the pages cited by Mutawi. The pages in question are Dupuy, pp. 246-247. The other source cited is the Churchills' *The Six-Day War*, which does claim that Israeli air supremacy was vital to Israel's victory over Jordan. However, the Churchills note that Israeli airstrikes "were not particularly effective against the Jordanian armour," and helped mainly by interdicting Jordanian movements through the hills of the West Bank. It is also worth noting that the Churchills' book is among the least reliable accounts of the fighting and is prone to terrific exaggerations, such as claiming that the Jordanians had to fight "in open country for several days on end under constant aerial bombardment and strafing, both night and day." Randolph S. Churchill and Winston S. Churchill, *The Six Day War*, Paperback edition, (London: Heinemann, 1967), pp. 144-146.

<sup>149</sup> Lunt, pp. 99-100. On Israeli ground attack sorties against Jordan, see O'Ballance, *The Third Arab-Israeli War*, pp. 74, 220.

Jordanian tactical performance was sufficiently poor that there is no reason to believe they could have defeated the Israelis even without IAF participation. At Latrun, Radar Hill, and throughout Jerusalem, Jordanian units were only capable of fighting from their fixed defenses and once the course of battle changed, they were incapable of adapting. Thus as soon as the Israelis had penetrated Jordanian lines, the fight was effectively over because the Jordanians would not shift their forces or counterattack to prevent the Israelis from clearing their positions. Indeed, in his memoirs, Israeli General Uzi Narkiss notes that the 10th Mechanized Brigade's attack up the ridge of the Jerusalem corridor should have been suicidal, but because Jordanian resistance was so incompetent, it turned into an Israeli rout.<sup>150</sup> Jordan's armored formations did little better than the infantry: the M-48 battalion of the 60th Armored Brigade was easily defeated by a smaller force of Shermans (not even Super Shermans), the 12th Armored Battalion was beaten up by Israeli armor whenever the odds were close to even and the 12th wasn't defending an impregnable position, and even the 40th Armored Brigade only performed competently when under the direct control of its outstanding brigade commander.<sup>151</sup>

Given these problems, it is very hard to believe that the absence of the IAF would have somehow completely transformed the situation. There were several instances where IAF intervention had a major *and direct* impact on the course of operations, but in each of these cases, had the IAF not intervened, there is no reason to believe the Israelis would not still have won the war, just not as quickly or easily. In particular, the IAF interdicted many Jordanian attempts to reinforce Jerusalem, preventing elements of 60th Armored Brigade and 27th Infantry Brigade and the entire 6th Infantry Brigade from reaching the city on 6 June. However, had those units been able to reach the city there is nothing to suggest they would have dramatically altered the outcome of the fighting. Even if they had been able to arrive around mid-day on 6 June, Abu Tor, Tel al-Ful, and Ammunition Hill/Shaykh Jarrah all would have fallen already. Nor is there any reason to believe that these units would have fought any better than the Jordanian forces that actually were there and thus been able to counterattack and drive the Israelis from their conquests. Obviously, the additional forces would have delayed Israel's advance, if only because it might have taken a day or more to defeat them, but this probably would not have made much difference in the end. Israel consistently rejected UN and superpower pressure for a ceasefire, suggesting that an extra day or two to complete the conquest of the West Bank would not have radically altered the outcome of the war.

Similarly, while the absence of the IAF might have allowed the 40th Armored Brigade either to hold its position at Qabatiyah crossroads or to fall back to a more defensible position farther south, this likely would still have proven irrelevant. One capable Jordanian brigade was not going to stop the Israeli conquest of the West Bank.

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<sup>150</sup> Narkiss, p. 113.

<sup>151</sup> Some might be willing to attribute the poor performance of the 60th Armored Brigade to the effects of Israeli air strikes as it moved to Jerusalem. While it is true that the 60th was hit by Israeli air strikes twice while it moved from Jericho to Hebron and then back to Jerusalem, these attacks should not have been a major factor in the fight at Tel al-Ful. First, the 60th lost only a small number of tanks and other vehicles in these attacks. (O'Ballance, *The Third Arab-Israeli War*, pp. 182-183, 190, 220). Second, while the psychological effects of air attack often greatly exceed the physical impact, evidence from the Second World War and the Gulf War indicates that only prolonged, continuous bombing has lasting psychological impact and the effects of even very heavy aerial bombardment fade quickly if they are not constantly repeated over the course of many days or even weeks. (See for example, Ian Gooderson, "Allied Fighter-Bombers Versus German Armour in North-West Europe 1944-1945: Myths and Realities," *Journal of Strategic Studies*, 14:2, June 1991, pp. 210-231; and Ian Gooderson, "Heavy and Medium Bombers: How Successful Were They in the Tactical Close Air Support Role During World War II?" *Journal of Strategic Studies*, 15:3, Sept. 1992, pp. 367-399; Barry D. Watts and Thomas A. Keaney, *Gulf War Air Power Study, Volume II, Part 2: Effects and Effectiveness*, [Washington, DC: GPO, 1993], pp. 202-205, 221-226.) Consequently, there is no reason to believe that the 60th should have been significantly handicapped on 6 June by the two air raids the Israelis conducted against it on 5 June.



Moreover, Peled's armored brigade had already bypassed the 40th and was in the Jordanian rear, on its way to Tubas. Had the 40th not been forced back and then mauled by the combination of Israeli armor and airstrikes, Tel Aviv could just as easily have brought this armored brigade back north along the Jenin-Tubas road and crushed the 40th between it and the Israeli units around Jenin.

### *Why Jordan Lost the Six-Day War*

Jordan suffered a crushing defeat between 5 and 7 June 1967, and as with any such catastrophic failure, a large number of factors produced this outcome. The most obvious problem from which Jordan suffered was the mistaken command decision to send the 60th Armored Brigade south to Hebron and the 40th Armored Brigade south to Jericho on 5 June. While understandable, this decision clearly contributed to Jordan's defeat as it took Amman's only armored reserves out of the picture for 6-12 hours and exposed them to air attack.<sup>152</sup> As a direct contributor to this and other mistakes, one must also cite the constant stream of inaccurate information fed to Jordan's senior commanders by the Egyptians, by Jordanian field commanders, and probably by the Israelis. Jordanian command and control problems, specifically the rigidity of the Jordanian command system and the lack of intermediate formations between the brigades and the theater command, also impeded the Legion and prevented it from keeping pace with the rapid, fluid Israeli moves. Israeli air power also must be credited with playing an important role in the campaign, as it prevented Amman from shifting its forces as it would have liked and it broke up Jordanian concentrations whenever the Israeli advance threatened to bog down. However, while each of these factors was important, they were not decisive. Mostly they affected the timing and the cost of the Israeli victory, but they did not determine which side would win and which would lose.

Ultimately, the decisive factor in the Israeli invasion of the West Bank in 1967 was the tremendous imbalance between Israeli and Jordanian forces at the tactical level. Jordanian units were not as capable as they had been in 1948, manifesting many pathologies found in other Arab armies from which they had seemed immune prior to the dismissal of the British officers in 1956. In particular, they reacted extremely poorly to Israeli moves, often failing to react at all. By the same token, Israeli military effectiveness grew tremendously between 1948 and 1967. The bunch of poorly-armed and fractious amateurs who had made up the Haganah ranks in 1948, by 1967 had been transformed into an aggressive, disciplined, and highly capable of army. It was this gap in tactical capabilities that lost the West Bank for Jordan. For the most part, Jordanian units simply could not stand up to Israeli units except when they had overwhelming advantages from terrain, superior technology, and/or superior numbers. Indeed, although publicly they still blame General Riyadh for their defeat, according to Samir Mutawi, most Jordanian officers privately admit that Jordanian forces were so inferior to those of Israel that the outcome of the Six-Day War was a foregone conclusion regardless of the commander or his orders. In tactical engagements, the Israelis so consistently outfought the Jordanians, and by such a wide margin, that poor generalship could only have been an exacerbating factor, not a primary cause.<sup>153</sup> In the words of Brigadier Peter Young:

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<sup>152</sup> Just so there is no confusion in the reader's mind, let me reiterate my assessment of the decision to send the two armored brigades south on 5 June. I believe Riyadh's decision was an entirely reasonable choice to make. This is important because it indicates that the Jordanians did not necessarily suffer because they were led by some political hack from Egypt, as many have maintained. Riyadh was a competent general who made a reasonable command decision. However, given that the Egyptian drive into the Negev was pure fantasy, this move turned out to be detrimental to the Jordanians because it hindered them from meeting the Israeli thrusts against Jerusalem and Jenin more quickly and did not gain them anything in particular.

<sup>153</sup> Mutawi, p. 148.

To those of us who knew and loved the Arab Legion there can be only regret that given the chance to display its prowess in modern warfare, the Jordan Arab Army should have met with shattering defeat in a bare three days. . . .It is easy to say "this would never have happened if King Hussein had not sacked his British officers." And it is true that not all the "reforms" that followed the events of March 1956 seem to the present writer to have been well-judged, but the essential truth of the matter is very simple, even with Iraqi backing, the forces of Jordan . . . were not strong enough to try conclusions with Israel.<sup>154</sup>

### **Jordanian-Israeli Clashes 1968-1970**

Between the Six-Day War and Black September Jordan made considerable efforts to reform and rebuild its military. Politicization remained about the same, because the King feared the sudden increase in the numbers of disgruntled Palestinian refugees in his kingdom and felt the need to ensure the loyalty of the army to guard his regime against a Palestinian uprising. Although the Jordanians still retained many of their British inspired military traditions, the Legion increasingly began to adopt American doctrine and methods. Despite their efforts to reform, the limited combat Jordanian forces saw during this period showed little improvement, and possibly even a continuing decline in military effectiveness.

#### **The Lessons of 1967**

After the catastrophe of June 1967 the Jordanian armed forces recognized that they needed to take stock of what had happened and what needed to be done to correct their past problems. One of the first and most important conclusions they reached was that they suffered from a "cultural tendency toward self-delusion."<sup>155</sup> To try to correct this problem, the General Staff attempted to revamp Jordanian training to stress objective reporting over everything else.<sup>156</sup> Perhaps because they recognized this tendency and feared that they were unlikely to get an objective appraisal from their own people, Amman brought in a team of Pakistani military officers to conduct the after-action report on their performance in the Six-Day war and to recommend a comprehensive reform program for the Arab Legion.<sup>157</sup>

As a result of this review by the Pakistanis, Jordan made a number of significant changes to its armed forces. Divisions were established, the top ranks were thinned by abolishing redundant command positions, and the General Staff's authority was strengthened. Jordanian fortification practices were revised to stress greater depth, camouflage, and resistance to airstrikes. A fourth company was added to all battalions and a fourth battalion added to brigades to give tactical commanders greater staying power. Jordanian training was revamped to stress initiative, independent action, and combined arms coordination. Plans were made to build a larger, more modern RJAF that would concentrate on counterair and ground attack operations.<sup>158</sup>

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<sup>154</sup> Young, pp. 50-51.

<sup>155</sup> Dupuy, p. 346. Also see Cordesman, *Jordanian Arms*, p. 128. Cordesman likewise notes that an important conclusion of Jordan's military post-mortem was that it possessed culturally-driven problems that had hindered the Legion's performance in battle.

<sup>156</sup> Author's interviews with US military personnel May 1993.

<sup>157</sup> Mutawi, pp. 165-166.

<sup>158</sup> Cordesman, *Jordanian Arms*, pp. 44, 46, 128; El-Edroos, pp. 430-432; Mutawi, pp. 157, 165-166.

## Depoliticization

Jordan's defeat in 1967 had been so traumatic that it forced King Hussein to make military effectiveness a higher priority than it had been before the war. Specifically, he felt it necessary to dispense with some of the commissariat measures he had imposed in the wake of the expulsion of the British from the Arab Legion in 1956. For example, he allowed the creation of two (later four) divisions and the strengthening of the operational authority of the General Staff. Previously, the King had resisted both of these reforms for fear that either position could become a convenient base from which an ambitious senior officer might attempt to stage a coup. After June 1967, the King agreed to these changes, recommended by the Pakistanis, because he believed it crucial for Jordan to try to close the widening gap between Jordan and Israel in military effectiveness. In addition, the King apparently felt fairly secure in the loyalty of his army and so was willing to tolerate moves that would increase military effectiveness even at the expense of some loss of control over the armed forces. Although it is unclear exactly why the King felt this greater ease, the most likely explanation is that his efforts to pack the officer corps and key combat units with devoted Bedouin tribesmen had convinced him that he could withstand a hadari coup attempt.<sup>159</sup>

## The Battle of al-Karamah, March 1968

After the defeat of the Arab armies in the Six-Day War, the Palestinians concluded that they had to take matters into their own hands if they were going to regain their lost lands. Palestinian fedayeen once again began attacking Israel, often with a greater stridency and ruthlessness than had been the case before the war. Egypt and Syria, still smarting from the drubbing they had taken at the hands of the Israelis, forbade the Palestinians from conducting attacks on Israel from their territory. With a massive Palestinian population, Jordan was in no position to do the same, and so the fedayeen congregated in Jordan and made it their base of operations against Israel. For their part, the Israelis responded by returning to their policy of reprisals against the Palestinians, as well as the Jordanians for not preventing the attacks. In turn, the Jordanian military regrouped, reorganized, and rearmed as best it could and deployed to try to prevent the Israeli violations of their sovereignty.<sup>160</sup>

Much of the Palestinian activity originated from a training base they had established at al-Karamah just across the Jordan near the Allenby bridge. As early as 14 March 1968, Jordanian intelligence began to detect signs of an impending Israeli operation against al-Karamah. Israeli forces began to concentrate in the area of the Allenby and Damiyah bridges, and the Jordanians noted two conferences involving high-ranking Israeli military officers in this area. In response to this activity, Amman alerted the 1st Infantry Division and ordered it to take up defensive positions at the two bridges and around the Jordanian camp at al-Karamah. By 20 March, Jordanian intelligence had identified elements of the Israeli 7th Armored Brigade, 60th Armored Brigade, 35th Paratroop Brigade, 80th Infantry Brigade, a combat engineer battalion, and five battalions of artillery on the west bank of the Jordan between the Damiyah and Allenby bridges. Given this substantial concentration of firepower and the weakened state of the Arab Legion, the Jordanians feared that the Israelis were actually gearing up for a drive on Amman.<sup>161</sup>

The Jordanian 1st Infantry Division took up positions at the two bridges, in the various towns of the Jordan valley and on the steep ridges that formed the eastern wall of the river valley. The reconstituted but understrength 60th Armored Brigade was attached

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<sup>159</sup> Dupuy, p. 378; Gabriel, pp. 29-35; Mutawi, p. 44; Pascal, et. al., p. 41; Perlmutter, pp. 56-57.

<sup>160</sup> Dupuy, p. 350; El-Edroos, pp. 430-438; Herzog, *The Arab-Israeli Wars*, pp. 202-205; Mutawi, pp. 171-172.

<sup>161</sup> Dupuy, pp. 350-351; El-Edroos, p. 438; Herzog, *The Arab-Israeli Wars*, pp. 203-204;

to the 1st Infantry Division for the coming battle and its elements were mostly parceled out among the infantry units to provide some armor support. Amman also added most of its remaining armored car, antitank and artillery units to the 1st Infantry Division to bolster its firepower. Infantry brigades of the division were deployed opposite the Allenby, Damiyah and King Abdullah (south of the Allenby) bridges, each with an attached tank company. Most of the artillery and the remaining armor was concentrated on the Jordan valley ridge overlooking al-Karamah itself, where these forces could fire down into the valley.<sup>162</sup>

The Israelis were indeed preparing for an attack on al-Karamah, but their forces and their ambitions were not nearly as imposing as Amman feared. Israel had about a brigade's worth of armor (drawn from the two brigades detected by Jordanian military intelligence), an infantry brigade, a paratroop battalion, an engineering battalion and five battalions of artillery. The Israeli units were divided up into four task forces. The largest was to cross the Allenby bridge and drive on al-Karamah from the south. A second group would ford the Jordan near the Damiyah bridge and drive on the town from the north, thereby catching the Palestinians in a pincer move. Meanwhile, elements of the paratroop battalion would be helo-lifted in to al-Karamah itself. The last force would make a diversionary attack at the King Abdullah bridge both to draw off strength from al-Karamah and to cover the right flank of the main thrust. Tel Aviv's ultimate objectives are somewhat unclear. That they wanted to destroy the Palestinian camp and capture or kill as many of the fedayeen is clear, but what is not known is to what extent the Israelis were hoping to clash with the Arab Legion, to bust it up a bit more in the hope of convincing Amman to rein in the Palestinians. The Israelis almost certainly were aware that the Jordanian 1st Infantry Division was dug-in around al-Karamah, suggesting the Israelis may have been looking for another chance to beat up the Arab Legion.<sup>163</sup>

At dawn on 21 March, all four Israeli forces began their assaults simultaneously without any prior artillery or aerial bombardment. In the north, the Israelis were able to ford the Jordan and their engineers built a pontoon bridge. When they turned south to drive on al-Karamah they ran into one of the Jordanian infantry brigades, fortified and supported by armor, artillery, and plentiful anti-tank weapons. The Israelis called in airstrikes to try to break up the Jordanian defensive positions but the IAF could not inflict much damage on the entrenched Jordanians, and the Legionnaires hung tough. Although the Jordanians did not venture out of their defensive positions to try to maneuver for an advantage against the Israelis, they succeeded in holding back several Israeli frontal assaults with sheer firepower. In the far south, the Israeli diversionary effort against the King Abdullah bridge failed to even establish a foothold across the bridge despite repeated efforts with considerable air support. In this case, the Jordanian positions were well sited to bring tremendous fire power on the bridge area itself, and the Israelis were consistently driven back by the volume of fire they encountered.<sup>164</sup>

The most successful Israeli drive was the main attack on al-Karamah. The paratroopers landed first and began clearing the Palestinian training camp. The Israeli main body was able to break through the Jordanian defenses at the Allenby Bridge and then spread out. The rest of the paratroop battalion along with some armor drove north to participate in the operations at the Palestinian camp itself. The fedayeen fought back hard and were joined by Arab Legion regulars supported by artillery fire from the surrounding hills. Nevertheless, the Jordanians were unable to prevent the Israelis from demolishing much of the camp, forcing Yasir Arafat to flee the camp, and killing or capturing most of the Palestinian force. A small force of Israeli infantry and armor took up blocking positions to the south to protect the right flank of the Israeli thrust against an

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<sup>162</sup> Dupuy, p. 351; El-Edroos, pp. 438-439; Herzog, *The Arab-Israeli Wars*, p. 203;

<sup>163</sup> Dupuy, pp. 351-352; El-Edroos, p. 438;

<sup>164</sup> Dupuy, p. 353; El-Edroos, pp. 439-440; Herzog, *The Arab-Israeli Wars*, pp. 204-205;

attack by the Jordanian brigade deployed opposite the King Abdullah Bridge. The Jordanians threw some armor against this Israeli unit but neither side pushed too hard and the engagement turned into a stalemate. A larger force of Israeli armor and infantry drove east to block the as Salt-Allenby Bridge road. The Jordanian armor reserve was deployed along the as-Salt road and so a fierce battle developed when the Jordanians attempted to commit this force to the defense of al-Karamah. In a tank battle, the Israelis were able to push the Jordanians back into the hills, where they dug-in and continued to fire down on the Israeli forces in the valley below. The Israelis countered with airstrikes against the tanks and artillery along the ridge, but this had little effect on the accuracy or volume of Jordanian fire.<sup>165</sup>

By the end of the day both sides had had enough. The Israelis retreated back across the river with their Palestinian prisoners, and the Jordanians did not follow. Both sides claimed victory. The Israelis claimed to have accomplished their stated objectives of destroying the al-Karamah fedayeen camp, while the Jordanians claimed to have badly bloodied the Israelis and prevented them from mounting a drive on Amman. The Israelis had 28 killed and 69 wounded in addition to losing four tanks, three half-tracks, two armored cars, and an airplane shot down by Jordanian anti-aircraft artillery. The Palestinians had about 100 fedayeen killed, another 100 wounded and 120-150 captured. The Jordanians suffered 61 dead, 108 wounded, 13 tanks destroyed, 20 tanks damaged, and 39 other vehicles damaged or destroyed.<sup>166</sup>

### **General Observations on Jordanian Performance at the Battle of al-Karamah**

A few brief remarks are in order about this fight. First, while there is little doubt that the Israelis never had any intention of pushing on to the Jordanian capital, it seems the Jordanians did much better than the Israelis had expected. The Israelis almost certainly did not expect to find the scale or intensity of resistance from the Arab Legion as they actually encountered. The Israelis did mostly succeed in destroying the Palestinian camp and capturing or killing most of the fedayeen there, but they had a much tougher time than they expected and probably did not do nearly as much damage to the Jordanians as they had hoped. If they had intended to push the Jordanians around, they had been sorely disappointed.

Jordan's strategic leadership in this incident was quite good, probably reflecting the various changes Amman had made in the wake of the Six-Day War. At the strategic level, Jordanian military intelligence did a creditable job detecting and monitoring the Israeli build-up and identifying al-Karamah as the likely immediate target. If their supposition that the Israelis might drive on to Amman was far-fetched, it was the best kind of intelligence mistake because it prompted the Jordanian military to be over-prepared rather than underprepared. Amman's high command also did well in quickly concentrating the 1st Infantry Division around al-Karamah and reinforcing it with armor, artillery, anti-tank weapons and everything else they could get their hands on to hold back the Israelis. Finally, Jordanian deployments and fortifications around al-Karamah were quite good, showing a real improvement over 1967. Jordanian forces were well sited to block all major axes of advance, to cover all chokepoints with heavy firepower, and to be able to reinforce threatened sectors. For the most part, the General Staff was careful to ensure that Jordanian units had the advantages of excellent fortifications and superior terrain wherever they took on the IDF.

At the tactical level, al-Karamah had little to say about Jordanian reforms, but what it did demonstrate was not terribly encouraging. Jordanian artillery was very accurate, but it was conducting pre-planned, pre-registered fire missions almost

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<sup>165</sup> Dupuy, pp. 353-354; El-Edroos, pp. 439-440; Herzog, *The Arab-Israeli Wars*, pp. 204-205;

<sup>166</sup> Dupuy, p. 354; Herzog, *The Arab-Israeli Wars*, p. 205;

exclusively.<sup>167</sup> Whenever Jordanian armor encountered Israeli armor--and these were mostly even fights in terms of numbers and types of tanks involved--the Jordanians either lost, or at best, gained a draw which still favored the Israelis because it kept the Jordanians away from the paratroopers at al-Karamah. In the main Jordanian armor counterattack on the as-Salt road, the Jordanians were actually thrown back fairly easily by the Israelis. Arab Legion units also mostly continued to remain passive. With the exception of the armor attack along the as-Salt road, the Jordanians failed to conduct any large-scale counterattacks and really did not conduct even that many smaller ones. The vast majority of Jordanian units were content to sit in the hills or behind their fortifications and fire at the Israelis from a distance rather than aggressively attempting to close with them, destroy them and push into their operational rear or flanks.<sup>168</sup>

### **Black September and the Syrian Invasion of Jordan, 1970-1971**

Jordanian military effectiveness continued to show the same signs of a slow decline when the Arab Legion was called on to crush the power of the Palestinian militias operating on the East Bank and then to defeat a Syrian invasion in support of the Palestinians. Politicization had diminished further by 1970, since even more of the reforms identified after the Six-Day war had been implemented than had been the case at the time of the Battle of al-Karamah. The Jordanians continued to rely mostly on British methods, but the shift to American weaponry and practices had also progressed since 1968. Moreover, by 1970 fewer and fewer Legion personnel had had direct exposure to British officering and training as British-trained personnel retired from active service and were replaced by new recruits.

#### **Background to the Conflict**

Relations between the Palestinian fedayeen and their Jordanian hosts were never good, and deteriorated rapidly after the Six-Day War. The PLO leadership interpreted the lessons of that conflict as demonstrating that the established Arab states and their conventional militaries would never be able to evict Israel from Palestine. They concluded that only by waging an aggressive guerrilla war themselves would Israel be forced out of Palestine just as the Viet Minh had forced out the French and the Chinese Communists had forced out the Nationalists. Consequently, the PLO greatly increased the size, scope, and frequency of their attacks on Israel. These attacks brought Israeli retaliation--such as the raid on al-Karamah--creating frictions between Amman and its Palestinian guests. Moreover, the humiliating defeat of the Arab Legion on the West Bank in 1967 made the Palestinians more willing to flout Jordanian authority. By 1969, the Palestinians were attempting to establish a state within a state that would give their organizations complete control over Palestinian actions both within Jordan and between the Palestinian community in Jordan and the outside world. This situation was anathema to the King and so in the fall of 1970 Amman moved to reassert its authority over the Palestinians.

#### **The Balance of Forces on the Eve of War**

Three years after the Six-Day War, the Arab Legion had replenished its strength and had even expanded considerably. In 1970, the Jordanian Army boasted 70,000 men, of which two-thirds were Jordanian Bedouin, and the remaining third were Palestinians and other hadari. As always, the Bedouin dominated the armored formations, several

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<sup>167</sup> Cordesman, *Jordanian Arms*, p. 83; and Dupuy, pp. 287-315.

<sup>168</sup> El Edroos, p. 441.

infantry brigades, and most of the officer billets in all combat units, while the Palestinians manned the technical support branches and the enlisted ranks of the other infantry brigades. The Legion had replenished its tank strength with 300 of the latest American M-60s and improved British Centurions (equipped with new engines and the L-105 gun) in three armored brigades and a mechanized brigade. Likewise, Amman also had rebuilt its air force by purchasing 30 Hawker Hunters and 18 F-104s.<sup>169</sup>

The growing tension between the Hashimite monarchy and the Palestinian fedayeen groups began to have an impact on the Arab Legion. Bedouin officers and enlisted increasingly clashed with Palestinian personnel, straining relations within the armed forces and reducing morale in many mixed ethnic-group units. These problems led to a growing undercurrent among the Bedouin officers that favored a general move to crush the Palestinian fedayeen groups. These problems also prompted Amman to begin watching--and even redeploying--some of its Palestinian dominated units for fear they would try to stage a coup.<sup>170</sup>

On the other side, the Palestinian fedayeen were a fractious gaggle of groups and organizations. At least on paper, the various fedayeen bands numbered 25,000 full-time guerrillas and 76,000 part-time militiamen. This strength may have been greatly exaggerated, and at any rate was not as impressive as it seemed. The PLO units were lightly armed, possessing no armor or other weapons heavier than light mortars and shoulder-launched anti-tank weapons. They had little or no military training, a rudimentary organization, and even less discipline. In addition, the Palestinians were divided up into countless groups, factions, fronts, sub-factions, and parties with overlapping and constantly shifting loyalties that further hampered their ability to act in concert.<sup>171</sup>

### **Initial Moves Against the PLO**

The Jordanian General Staff had nothing but contempt for the PLO guerrillas and this sentiment had a heavy influence on their planning. The Jordanians did not expect the Palestinians to be able to offer any significant resistance and anticipated that they would fold quickly under direct pressure from the Arab Legion. There was an additional element driving the Jordanians to plan for a quick campaign: the possibility of Syrian intervention. The Syrians were active supporters of the PLO and vociferous enemies of the Hashimite monarchy. Consequently, Amman wanted to crush the Palestinians quickly, before the Syrians could get involved. Based on this concern for Syrian intentions and disregard for Palestinian capabilities, the Jordanian plan was, in the words of El-Edroos, designed to be a "48-hour blitzkrieg mopping up operation."<sup>172</sup> The Legion would begin by sweeping Amman and Jordan's other major cities of their large fedayeen presence on 17 September, and then would isolate and dispatch any remaining fedayeen concentrations in the countryside. Because the operation was mounted quickly and because the Jordanian generals were so certain of the great imbalance between their forces and the fedayeen, the General Staff's planning was superficial and haphazard and the operation suffered as a result.<sup>173</sup>

In Amman, the Jordanians divided the city between the 4th Mechanized Division, reinforced with the 60th Armored Brigade, and the 1st Infantry Division. For whatever reason, the Jordanians assigned the more open southern suburbs to the 1st Infantry Division, while the armored elements of the 4th Mechanized Division and 60th Armored Brigade were to advance into Amman's Old City. The Old City was a typical Middle

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<sup>169</sup> El-Edroos, p. 330; O'Ballance, *Arab Guerrilla Power*, pp. 144-145; Metz, p. 240.

<sup>170</sup> O'Ballance, *Arab Guerrilla Power*, pp. 145-156.

<sup>171</sup> El-Edroos, p. 449.

<sup>172</sup> El-Edroos, p. 449.

<sup>173</sup> El-Edroos, pp. 449-455; Lunt, p. 138; O'Ballance, *Arab Guerrilla Power*, p. 144.

Eastern *madinah*, with narrow streets, abutting houses, unexpected alleys and frequent dead ends. In short, it was the worst place imaginable to operate with tanks and APCs. To make matters worse, many of the Jordanian units sent their tanks forward with little or no infantry support. On the other hand, the PLO units were well-stocked with shoulder-launched anti-tank weapons and wrought havoc with the Jordanian armor. By the second day, 18 September, the reinforced 4th Mechanized Division was bogged down on the outskirts of the Old City after having taken unexpectedly high losses. Similarly, the 1st Infantry Division had enjoyed some success clearing the open and only lightly defended suburbs south of the city, but were then halted in their tracks by fedayeen defensive positions at the southern edge of Amman's central commercial district. At the end of the 48 hours the General Staff had told the King they would need to crush the Palestinians, the heart of Amman remained in PLO hands, the Jordanians had taken fairly heavy casualties, and the Legion was at a dead halt with little indication of when they might be able to get back on track.<sup>174</sup>

The situation in northern Jordan was even worse. There Amman had deployed the 2nd Infantry Division with the 40th Armored Brigade and other supporting units. These forces were to clear the towns of Irbid, Ramtha, and Ajlun, where there were major fedayeen concentrations--albeit, smaller than PLO strength in Amman. Although the Legion offensive in the north was to coincide with the push into Amman, the Jordanian forces moved too slowly and allowed the PLO to strike first. The fedayeen established defensive positions around their camps, turned back the initial Jordanian moves, and took control of Irbid and most of northern Jordan.<sup>175</sup>

To add to Amman's problems, the operation against the PLO caused some of the frictions within the Legion to surface. About 5,000 Palestinian soldiers and officers deserted from the armed forces to join the PLO, in some cases bringing badly needed heavy weapons with them. Although it would later become clear that the vast majority of Palestinians in the Legion remained loyal to the King, and none of the larger Palestinian-dominated formations deserted as a whole, at the time, this seemed like a virtual hemorrhage to the Army high command. Some key Jordanian military personnel also disagreed with the King's policy and either resigned or refused to participate. In particular, the commander of the 2nd Infantry Division resigned his command on the third day of the operation, probably because he sympathized with the PLO.<sup>176</sup>

### **The Syrian Invasion**

As if these various problems weren't bad enough for the Jordanians, on the second day of the campaign, the Syrian government decided to intervene on behalf of the Palestinians. The Syrian Ba'thists had never been on particularly good terms with the Hashimite monarchy, and were ardent supporters of the Palestinian guerrilla campaign against Israel. Initially, the Syrians sent a reinforced armored brigade to aid the Palestinian units around Irbid. A number of small detachments from the Arab Legion attempted to hold up the Syrian advance, but they were easily brushed aside.<sup>177</sup> Because the Jordanians continued to hammer away at the Palestinians with little sign of abating, on 20 September, Damascus escalated its involvement by sending the heavily reinforced 5th Infantry Division into Jordan. The Syrians attached two armored brigades to the 5th Infantry Division, bringing its tank strength to 200-300 T-55s and its manpower to over 16,000. In addition, unlike the initial Syrian invasion force, which confined itself to extreme northern Jordan, the 5th Infantry Division drove into Jordan at ar-Ramtha and

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<sup>174</sup> El-Edroos, pp. 451-458, 467, 482; Lunt, p. 138; O'Ballance, *Arab Guerrilla Power*, pp. 145-147.

<sup>175</sup> El-Edroos, pp. 453-454; O'Ballance, *Arab Guerrilla Power*, p. 148.

<sup>176</sup> El-Edroos, p. 454; Lunt, p. 136; Metz, p. 240.

<sup>177</sup> Dupuy, p. 380; Edgar O'Ballance, *Arab Guerrilla Power*, (Hamden, CT: Archon Books, 1973), p. 150; Seale, *Asad*, p. 158.



headed south, straight toward Amman.<sup>178</sup>

At first, the Jordanians had made no direct move in response to the Syrian invasion. The King and his generals were most concerned with gaining control over Amman and this required all their attention. In addition, having one Syrian brigade at Irbid was maddening, but was not really a threat as the 2nd Infantry Division and 40th Armored Brigade could prevent it from causing real harm. Amman believed it could deal with this relatively small Syrian force later, but first it needed to take care of the Palestinians. Consequently, the Jordanians actually drew off the mechanized infantry battalion of the 40th and sent it south to add more infantry to the efforts of the 4th Mechanized Division in Amman. However, when the Syrians then committed the reinforced 5th Infantry Division on a drive toward the capital itself, the Jordanians suddenly became very alarmed. They reacted by shifting at least the 25th "Khalid ibn al-Walid" Infantry Brigade of the 2nd Infantry Division and the two armored battalions (100 improved Centurions) of the 40th Armored Brigade northeast to stop the Syrians.

The Jordanian forces deployed in two lines south of ar-Ramtha. The 25th Infantry Brigade dug-in along the dominating Kitim/an-Nu'aymah escarpment that forms the southern wall of the Vale of Ramtha, blocking the Syrians' egress from the valley south or southwest. Meanwhile, the 40th Armored Brigade took up defensive positions on another ridgeline along the main ar-Ramtha/Amman road just south of ar-Ramtha. The Syrian 5th Infantry Division first attacked the Jordanian 40th Armored Brigade on 21 September. In a fierce battle that raged all day, the Jordanians were slowly pushed off the ridgeline by the Syrian armor. The Jordanian commander then decided to abandon the valley and pull back to the 25th Infantry Brigade positions along the Kitim/an-Nu'aymah ridge, thereby abandoning the vital ar-Ramtha crossroads to the Syrians. With this intersection in their control, the 5th Infantry Division was able to link up with the Syrian forces in Irbid.

Neither the Jordanians nor the Syrians fought terribly well on 21 September. The Syrians essentially just blundered into the Jordanian armor, and then launched repeated frontal assaults to try to drive the Centurions off the ridge. The Syrians employed no stratagems or sophisticated tactics but simply tried to bludgeon their way through the Jordanian lines with their superior numbers and firepower. Although the Jordanians were determined to stop the Syrians, they made little effort to counterattack into the flanks of the clumsy Syrian attacks, nor did they otherwise try to outmaneuver the Syrian units. The Centurions were content to try to pick off Syrian tanks from their hull-down positions along the ridge line, relying on the greater range and killing power of their 105 mm guns. In fact, most reports suggest that the Jordanian tanks rarely ever even changed their firing positions during the battle. Nevertheless, despite their advantages in equipment and position, the Jordanian gunners appear to have done particularly poorly, as they were only able to destroy 10 Syrian T-55s while losing 19 Centurions. Although both sides had artillery support available, either it was not employed or, more likely, failed to have any appreciable effect on the fighting. Moreover, the Jordanians were helped by the fact that the Syrians did not employ their infantry to drive off the unsupported Centurions with infantry anti-tanks weapons. By late afternoon, the poor marksmanship of the Jordanian tankers plus the Syrians' numerical advantage of at least 2:1 were beginning to take their toll and the Jordanians retreated.<sup>179</sup>

The defeat of the 40th Armored Brigade, sent King Hussein into a near panic, and his biographer reports that he did not believe the Jordanians would be able to keep the

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<sup>178</sup> Arthur R. Day, *East Bank/West Bank*, (NY: Council on Foreign Relations, 1986), p. 77; Dupuy, p. 380; El Edroos, p. 455; James Lunt, *Hussein of Jordan*, (London: McMillan, 1989), p. 139; Donald Neff, *Warriors Against Israel*, (Brattleboro, VT: Amana Books, 1988), p. 40; O'Ballance, *Arab Guerilla Power*, p. 150; Seale, *Asad*, p. 158.

<sup>179</sup> Day, p. 77; El Edroos, p. 455; Lunt, pp. 140-141; Petran, p. 247.

Syrians from overrunning Amman.<sup>180</sup> On 22 September, Amman pulled out all the stops to throw the Syrians back. In particular, they decided to commit the RJAF in full force against the Syrian armor. Prior to that point, the Jordanian air force had been providing support to the Legion units battling the Palestinians, primarily around Amman. In addition, the Jordanians apparently had been concerned at first that if they committed their rather small air force, the Syrians would do the same, and the Jordanians would again lose the entire RJAF. However, the situation on the ground appeared so dire to Amman, that the King and the General Staff felt the regime's survival was at stake and the air force might have to be sacrificed to save the monarchy.

Thus on 22 September when the Syrian 5th Infantry Division attacked the Jordanian forces on the Kitim/an-Nu'aymah ridge, the RJAF threw everything it had into the battle. The Jordanians reportedly generated about 200-250 ground-attack sorties against the Syrian armor during the course of the day. Much to the relief of the Jordanian high command, the Syrians did not commit their air force to the fighting, giving the Jordanians complete freedom of the skies. In addition, because the 5th Infantry Division had only paltry air defense assets, the Jordanian aircraft faced little opposition and did not lose a single plane.<sup>181</sup>

The Syrian armor was badly battered by the Jordanian airstrikes. Jordanian armor did little, preferring to remain in their defensive positions and snipe at the Syrians from long range. Consequently, it fell to the RJAF to really engage the Syrians. The RJAF rose to the occasion, flying possibly as many as four or eight sorties per aircraft and maintaining a constant presence over the Syrian armor for nearly 16 hours.<sup>182</sup> Although the amount of physical damage they inflicted on the Syrians was probably on the low side, and certainly was not crippling by itself, the constant airstrikes broke the will of the Syrian armored forces.<sup>183</sup> In the late afternoon, the Syrians began retreating after

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<sup>180</sup> Lunt, p. 141.

<sup>181</sup> Day, p. 77; El Edroos, p. 455; Gabriel, p. 43; Lunt, pp. 140-141; O'Ballance, *Arab Guerilla Power*, pp. 152-153; Seale, *Asad*, pp. 158-159.

<sup>182</sup> The wide range in the number of sorties reflects my uncertainty as to how many Jordanian aircraft participated in this campaign. Specifically, if the Jordanians employed their F-104s, this would place the likely number of sorties per plane at about four. However, the F-104 was one of the worst aircraft imaginable to conduct ground attacks and I find it hard to believe they were used in this role by the Jordanians, even given their dire straits. If, as seems likely, the RJAF committed only its Hawker Hunters to this battle, the number of sorties per plane was likely closer to eight.

<sup>183</sup> No figures are available on Syrian armor losses to airstrikes vice ground fire. Thus my claim that damage inflicted by Jordanian airstrikes appears to have been "on the low side" is based on my own calculations. I estimate that the Syrians lost about 20-40 tanks and APCs to the Jordanian airstrikes. Let me explain how I derived this figure. First, the Syrians lost about 120 armored vehicles altogether on 21 and 22 September. If the Syrian experiences in 1967 and 1973 are any guide, about half of these losses almost certainly would have been the result of mechanical breakdowns and crews abandoning their vehicles in panic. This supposition is at least partially confirmed in Henry Kissinger, *White House Years*, (Boston: Little, Brown, 1979), p. 628, which cites US government estimates that 30-60 of 120 Syrian tanks lost in Jordan in 1970 were the result of mechanical problems. In addition, the Syrians lost ten tanks on 21 September to Jordanian tank fire. It is unclear as to how many, if any, APCs the Syrians lost on 21 September, however, it is reasonable to assume that they probably lost about 10 as well. Given that Jordanian armor does not seem to have performed any better on 22 September than it had the day before (and if anything, appears to have mostly hung back and allowed the RJAF to do all the hard work on 22 September) it seems unlikely that they inflicted any more damage on the Syrians on 22 September than they had on the day before. In other words, at most the Jordanian ground forces may have killed another 10-20 tanks and APCs. Consequently, the most damage Jordanian ground forces probably inflicted on the Syrians on 21 and 22 September was about 30-40 tanks and APCs killed. Indeed, my sense is that they probably did not even do this well, and the true number may have been closer to 20. Subtracting this figure of 20-40 lost to ground fire from the total Syrian losses (minus the 60 lost to breakdowns and abandonment) leaves 20-40 that likely were killed by air power.

advancing only a short distance in the face of the Jordanian aerial bombardment. The next day, the Syrians aborted their invasion of Jordan and began pulling their forces back to Syria. In all, the Syrians, lost 62 tanks, 60 APCs and suffered about 600 casualties in the two days of fighting.<sup>184</sup>

### **Finishing off the Palestinians**

With the Syrians in full retreat, the Jordanians were able to turn their attention back to the Palestinians. The defeat of the Syrians had an important influence on the fighting. The fedayeen had initially gotten a real morale boost when the Syrian army came to their rescue, while the Arab Legion suffered a corresponding drop. The defeat of the Syrians completely reversed this, undermining PLO morale and giving the Jordanian troops a huge psychological lift. Although the Palestinians continued to fight on with grim determination, they lacked some of the zeal which initially had allowed them to rebuff the initial Jordanian thrusts.

Nevertheless, the Jordanians could not dispatch the fedayeen quickly. The PLO forces in Amman continued to hold the Jordanian armor and infantry at bay and so the Arab Legion was forced to cordon off the center of the city and besiege the Palestinians there. After deploying a force to watch the Syrian border, the 40th Armored Brigade and 2nd Infantry Division were reconcentrated around Irbid. After a week of brutal combat in the city, the Jordanians were able to overpower the demoralized Palestinians. However, by the end of September the Jordanian high command needed to regroup. King Hussein had agreed to a ceasefire brokered by Nasser on 27 September (the day before Nasser died) and by early October, both sides were mostly observing it. Of course, both sides used the ceasefire as a cover behind which to prepare for the next round.<sup>185</sup>

In late November 1970, the Jordanians were ready to resume their campaign against the Palestinians. This time, the General Staff had carefully planned their operations and had learned from some of their previous mistakes. The Jordanians also had received new American M-60 tanks to make good their losses to the PLO and the Syrians. For the next ten months, the Jordanian armed forces conducted a systematic, meticulous campaign against the Palestinians. In the first stage, lasting from November 1970 until April 1971, the Legion concentrated on regaining control of the major towns still under Palestinian control, such as Amman, Ajlun, and Jarash. In the second stage, the Legion intended to force the PLO into the mountains of Ajlun in north-central Jordan, where they could be isolated from the civilian population and destroyed. This strategy was slow, but very effective. The Jordanians moved from town to town and refugee camp to refugee camp rooting out all PLO forces. They isolated each area of resistance and then slowly reduced it by employing massive firepower and indiscriminate killing,

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Since the RJAF flew about 200-250 ground-attack sorties on 22 September, destroying 20-40 armored vehicles yields an armored vehicle kill per sortie rate of 0.2-0.08. An analysis of the effectiveness of airstrikes against armored forces in major wars from World War II to Vietnam performed by Trevor Dupuy's Historical Evaluation and Research Organization (HERO) found that the average number of armored vehicle kills per sortie historically has been about 0.2. Thus the Jordanian performance was average to low depending on which end of the range the actual numbers fell at. However, in most of the cases examined by the HERO study the air forces under consideration faced very significant opposition from enemy air forces and ground-based air defenses, whereas the Syrian units in 1970 had no air cover and little in the way of ground-based air defenses. Thus the effectiveness of Jordanian airstrikes looks even poorer than the historical norm because they did not have to deal with such problems. See Historical Evaluation and Research Organization, *A Historical Analysis of the Effectiveness of Tactical Air Operations Against, and in Support of Armored Forces*, (McLean, Va: NOVA Publications, 1980), esp. p. 59.

<sup>184</sup> Day, p. 77; El Edroos, p. 455; Gabriel, p. 43; Lunt, pp. 140-141; O'Ballance, *Arab Guerilla Power*, pp. 152-153; Seale, *Asad*, pp. 158-159. Unfortunately, no figures for Jordanian casualties against the Syrians are available.

<sup>185</sup> El-Edroos, pp. 458-460; O'Ballance, *Arab Guerilla Power*, p. 155.

slaughtering many Palestinian civilians in the process. On 14 April, the last 5,000 Palestinian guerrillas finally agreed to pull out of Amman, leaving the center of the city in Jordanian hands.<sup>186</sup>

In late April 1971, most Jordanian towns were back in the hands of the Arab Legion and the Palestinian guerrillas had been forced back into a pocket around R'as al-Aqrah between Ajlun and Jarash. For two months the Jordanians besieged the fedayeen there, preparing for battle, bringing in reinforcements, whittling away at the Palestinian perimeter, and preventing them from receiving supplies from the outside. On 13 July they launched their final offensive to destroy the Palestinians. Amman sent the 99th Armored Brigade reinforced with a battalion of infantry up the eastern face of the mountain while the 4th "Hussein bin 'Ali" Infantry Brigade assaulted the southern face. Both columns had heavy air and artillery support, and engineer companies were attached to help overcome the difficult terrain. Finally, the 36th "Yarmuk" Infantry Brigade was deployed to the north and west of the mountain to block all routes of escape through the hills of Gilead. In a grueling four day pitched battle, the Jordanians eventually overcame the Palestinian resistance, taking their strongpoints one by one and wearing down their combat strength. On 18 July the last fedayeen surrendered to the Arab Legion. In this battle, the Jordanians suffered 120 killed and wounded, and altogether lost 600 killed and 1,500 wounded between September 1970 and July 1971.<sup>187</sup>

### **General Observations on Jordanian Military Effectiveness During Black September and the Syrian Invasion of Jordan**

The Jordanian armed forces eventually got the job done in this conflict, but their performance left much to be desired. The operation was supposed to have been a 48-hour blitzkrieg, but it turned into a 10-month siege. The Jordanian effort was poorly directed at the strategic level at first, although it improved dramatically beginning in November. In addition, at a tactical level, Jordanian units compounded the mistakes made by their senior leaders and hindered their better moves. The one real source of pride was the Jordanian air force which had performed superbly, especially in stopping the Syrian drive on Amman in September 1970.

#### *Strategic Performance*

Jordanian strategic direction during the crucial battles in September was mediocre at best. The planning for the initial moves against the PLO was disgraceful in its superficiality and sloppiness. Most orders were vague and issued only at the last minute with few preparations for logistics and other support. Overall, the General Staff either did not understand what was required for such an operation or else paid little attention to their planning. For example, Amman appears to have underestimated the size of the force required to simultaneously clear all of Jordan's main urban centers. In trying to sweep all the major cities at once the Jordanians dispersed their limited strength and wound up losing nearly all of the northern towns to the Palestinians. Only in Amman itself did they muster sufficient forces to take the city, and there they made the poor decision to rely primarily on armor without adequate infantry support in the old section of the city. If Jordanian tactical formations had performed better there is every reason to believe that two reinforced Jordanian *infantry* divisions backed by armor and airpower could have overcome the Palestinians in Amman. However, the decision to send armor into the Old City was likely to have been a disaster regardless of how well they fought.

Against the Syrians, the Jordanian high command did reasonably well. The failure of their initial assaults against the Palestinians plus the onset of the feared Syrian

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<sup>186</sup> Dupuy, p. 383; El-Edroos, pp. 460-462; Lunt, p. 148; O'Ballance, *Arab Guerilla Power*, pp. 155, 180-182.

<sup>187</sup> Dupuy, p. 383; El-Edroos, pp. 459, 462; O'Ballance, *Arab Guerilla Power*, p. 182.

invasion appear to have served as a wake-up call for Jordan's generals. They reacted swiftly to the Syrian moves, choosing a good location to make their stand and scraping together everything they reasonably could to stop the Syrians. This amounted to only two brigades at first because they needed to keep the 4th and 1st Divisions and the 60th Armored Brigade around Amman for fear of losing control of the capital to the Palestinians altogether. The other two brigades of 2nd Infantry Division were heavily engaged against the Palestinians throughout northern Jordan--and were also needed to watch the Syrian armored brigade around Irbid. Finally, the last armored brigade of the 3rd Armored Division--the 99th--was watching the Iraqi 3rd Armored Division which had been garrisoned in northeast Jordan since 1967. The Iraqis clearly sided with the Palestinians and it was unclear whether Baghdad would order the 3rd Armored Division to intervene on behalf of the PLO. In other words, there really wasn't anything other than the 25th Infantry and 40th Armored Brigades left to send to deal with the Syrians. Moreover, while the Jordanians had purposely refrained from committing their air force to battle before 22 September, when it became clear that the Jordanian ground forces around ar-Ramtha probably would not be able to hold the Syrians back, Amman overcame its previous hesitance and ordered an all-out air campaign against the Syrians which succeeded in turning them back.

Jordanian strategic performance improved considerably after November 1970. Once Brigadier General bin Shakir, the King's cousin and the Deputy Chief of Staff of Operations, was given complete control of the direction of the campaign, Jordanian planning improved rapidly. (Demonstrating that commissariat politicization doesn't always lead to incompetent generalship). In contrast to the half-baked country-wide effort they had initially attempted, the Jordanians concentrated their forces on one city or camp and reduced it before moving on to the next. Only the most minimal forces were employed to watch the Syrians and hold the Palestinians elsewhere, so that the maximum force could be brought to bear against each Palestinian stronghold in turn. While these clearing operations were painfully slow and extremely brutal, they also were very successful. Moreover, General bin Shakir appears to have been very careful to tailor operations to the capabilities of the Jordanian forces, whereas those in September appeared to assume a much greater gap in capabilities between the Palestinians and the Jordanians than was actually the case.<sup>188</sup>

### *Tactical Performance*

At the tactical level, the available evidence indicates the Jordanian forces performed poorly, especially against the Syrians. During the initial battles in September against the PLO, Jordanian forces appeared to disappoint their commanders in terms of their tactical prowess. Specifically, the General Staff's plans seemed to assume that Jordanian formations would be able to dispatch Palestinian forces of equal or greater size without much trouble, however, this did not prove to be the case. In all of these battles, the Jordanians possessed overwhelming advantages in firepower, in addition to the advantages in terms of discipline, organization, and coordination of being a true army. On the other hand, the Palestinians were mostly unorganized, barely trained, and poorly armed, however, they did have the advantages of defending excellent terrain and often outnumbered the Legionnaires. Ultimately, these various factors appeared to cancel one another out resulting in a bloody stalemate which indicates that, given the Legion's other advantages, the skill of its tactical formations did not count for much in the balance. Indeed, the little bits of evidence we have regarding Jordanian performance against the PLO tends to confirm this. Jordanian combined arms operations were very poor, and in several places the Legion took so long to get organized and get moving that the Palestinians were able to steal a march on them.

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<sup>188</sup> El-Edroos, pp. 460-461.

If most of the evidence suggesting a continued decline in Jordanian tactical capabilities is circumstantial for combat against the fedayeen, it is far more clear-cut in the battles with the Syrians. Jordanian ground forces performed miserably against Syrian armor. The 40th Armored Brigade--the elite unit of the Jordanian Army--deployed in hull-down positions along a ridgeline could not hold back the Syrian 5th Infantry Division for even one day. While it may not have been a bad idea to cling to the ridge and allow the more numerous Syrian tanks to beat their heads against the Jordanian positions, the fact that Jordanian armor does not even seem to have changed positions to prevent the Syrians from zeroing in on their hide-spots is inexcusable. What's more, despite their advantage in equipment and their superior defensive position, the Jordanian Centurions were actually out-shot by the Syrian T-55s in terms of tank kills.

To place the performance of the 40th Armored Brigade against the Syrian 5th Infantry Division in proper perspective, two comparisons are helpful. First, there is the performance of this same unit in 1967 against the Israelis at Qabatiyah crossroads. Although in 1967 the Jordanians significantly outnumbered the Israeli Super Shermans they faced (whereas in 1970 they were outnumbered by the Syrians by virtually the same ratio), the Israeli tankers were so far superior to the Syrians that the net "combat power" of the two attacking forces was not entirely unequal. In 1967, the Jordanians beat the Israelis back with heavy losses twice and only fell back when they were hit by a combination of IAF airstrikes and a flanking maneuver. In 1970, the Syrians could not even bring artillery fire to bear, let alone airstrikes, and they never tried to outflank the Jordanian positions, but instead kept making frontal assault. Yet the Jordanians were still defeated. Second, in 1973 the Israeli 7th Armored Brigade--the elite armored force of the IDF--faced the reinforced Syrian 7th Infantry division in the "Valley of Tears." In 1973, the equipment, organization, training, tactics, and operations of the 7th Infantry Division were virtually identical to those of the 5th Infantry Division in 1970. In 1973, the Israeli 7th Armored Brigade was dug-in along a ridgeline, they were equipped with Centurions, and had little artillery, infantry, or air support, just like the Jordanian 40th Armored Brigade in 1970. However, the outcome of the two battles was completely different. While the Israeli 7th Armored Brigade fought the Syrians to a standstill for four days, and destroyed six of the finest brigades in the Syrian army in the process, the Jordanian 40th Armored Brigade was forced back after less than a day and suffered heavier casualties than the Syrians. Clearly then, the 40th Armored Brigade was not in the same league as the Israeli 7th Armored Brigade, nor was it even as good as it had been in 1967.

The Jordanian air force, however, performed superbly against the Syrians. The sortie rate they managed on 22 September, four to eight sorties per plane in 16 hours, was extremely impressive, and rivaled Israeli sortie rates at the start of the Six-Day War. To some extent, the Jordanians were aided by the absence of any substantial anti-aircraft weapons on the Syrian side as well as the extremely short distance between the Jordanian bases and the battlefield in the Vale of Ramtha. Nevertheless, no other Arab air force was ever able to generate a sortie rate such as this, even for just one day. In addition, the Jordanian pilots showed both determination and real skill in attacking the Syrian armor, and probably accounted for the lion's share of the 120 Syrian armored vehicles destroyed on 21 and 22 September.

### **The October War, 1973**

In 1973, Jordan sent only a token force to participate in the new Arab war against Israel, and then only to aid in the defense of Syria. Jordanian forces were there mostly to "show the flag" and so their efforts were somewhat half-hearted. Consequently, we must be cautious in drawing too many conclusions from Jordanian performance in this conflict. For the most part, the Jordanians performed better than the other Arab armies, but still did

not perform terribly effectively and the Israelis had little trouble defeating them. To the extent that it is possible to generalize from this limited participation, it is further indication of the gradual decline of Jordanian combat effectiveness since the departure of the British in 1956. Commissariat politicization remained at the same low-levels it had settled at since 1967, while both praetorianism and palace guardism continued to have little impact on the Jordanian armed forces. Jordan's reliance on US military equipment deepened, as did its adherence to American doctrine and military practices. Meanwhile, the country's socio-economic level began to increase considerably in the early 1970s.<sup>189</sup>

### Course of Operations

Jordan had no desire to unnecessarily provoke the Israelis. Amman recognized Tel Aviv's military superiority and had no desire to repeat the experience of 1967. In addition, since 1970 Israel and Jordan had developed a kind of symbiotic relationship that neither side wished to disrupt. The Israelis had supported King Hussein during Black September by threatening to intervene if the Syrians did not back down, and this played an important role in Syria's decision not to press their invasion after 22 September.<sup>190</sup> The peaceful relationship between the two countries benefited them both once the PLO had been driven out of Jordan, and Amman did not want a new Arab-Israeli conflict to destroy this beneficial situation. Nevertheless, the King felt pressure to join the Arab effort from his subjects and his Arab allies--some of whom provided him with considerable financial subsidies. Ultimately, the King agreed to commit forces to defend Syria, but not to attack Israel. In addition, he went so far as to secretly ask Israel's permission to send forces to participate in the defense of Syria, and to ensure Tel Aviv that he had no intention of opening general hostilities with Israel.<sup>191</sup>

With a kind of absolution from Tel Aviv, Jordan dispatched the elite 40th Armored Brigade under the command of Colonel Khalid Hajhaj al-Majali to Syria on 13 October.<sup>192</sup> By then, the Syrian attack on the Golan had failed and the Syrian armies had been driven off the plateau completely. Indeed, on 11 October the Israelis had launched a counteroffensive toward Damascus, but on 12 October the newly-arrived Iraqi 3rd Armored Division accidentally blundered into the exposed right flank of the Israeli offensive, prompting the IDF commanders to rein in their tanks and take up defensive positions. Consequently, when the Jordanians arrived in southern Syria on 13/14 October, the front had stabilized: there was no Syrian threat to the Golan, and the Israeli threat to Damascus had also mostly abated.

Initially, the Jordanians were placed under the command of the Iraqi armored division, which in turn was under the control of the Syrian General Staff. Over the next several days the Syrian high command employed this combined force in several badly planned, badly supported and badly executed attacks against the southern flank of the Israeli salient. It is unclear whether the Syrians actually hoped the Iraqis and Jordanians would be able to drive the Israelis back, or simply wanted to keep pressure on the Israelis while they regrouped their disorganized and demoralized units. While the attacks were all lopsided defeats for the Arabs, the Israelis did not renew their drive on Damascus and

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<sup>189</sup> On Jordan's turn to US equipment and military methods, see Aharon Levran and Zeev Eytan, *The Middle East Military Balance, 1987-1988*, (Boulder, Colo: Westview, 1988), pp. 167-168; Tzvi Ofer ed., *The Iraqi Army in the Yom Kippur War*, translated by "Hatzav," (Tel Aviv: Ma'arachot, 1986), p. 25.. On Jordanian economic development see Day, pp. 94-116; Alan Richards and John Waterbury, *A Political Economy of the Middle East*, (Boulder, Colo: Westview, 1990), esp. pp. 208-209.

<sup>190</sup> Dupuy, p. 381; Marvin and Bernard Kalb, *Kissinger*, (NY: Dell, 1975), pp. 197-207; Seale, Asad, pp. 158-159.

<sup>191</sup> Dupuy, p. 537; Chaim Herzog, *The War of Atonement*, (London: Weidenfeld and Nicolson, 1975), pp. 200-201; Edgar O'Ballance, *No Victor, No Vanquished: The Yom Kippur War*, 1991 Edition, (Novato, CA: Presidio Press, 1991), p. 218.

<sup>192</sup> El-Edroos, p. 519.

the Syrians were able to reform and reequip some of their battered formations with new weapons rushed in by the Soviets.<sup>193</sup>

The first joint Iraqi-Jordanian attack came on 16 October. The plan was for the 40th Armored Brigade and the Iraqi 6th Armored Brigade to attack in conjunction against the southern flank of the Israeli salient. The Israelis had an understrength *ugdah* of four armored brigades with about 130 tanks in all deployed around a series of *tels*--volcanic hills--east of al-Qunaytrah. The Jordanians were to drive the Israelis off of Tel al-Mal, one of the westernmost hills, and then push northwest to cut the main Damascus/al-Qunaytarah road. The attack was scheduled for dawn, but the Iraqis could not get their act together by this time. Rather than wait for the Iraqis and launch a combined assault as planned, Col. al-Majali kept to the schedule and attacked alone. The 40th Armored Brigade, with about 80 Centurions and 40-50 M-113s, launched a frontal assault backed by Syrian and Iraqi artillery and multiple-rocket launchers against the positions of the Israeli 17th Armored Brigade (with about 30 tanks) on Tel al-Mal. Although the Israelis detected the Iraqi forces massing to the east of the Jordanians and this kept most of the Israeli *ugdah* pinned to its positions, because the Jordanians were attacking alone, the Israeli commander was able to commit another of his (understrength) brigades to aid the threatened sector. The Jordanians drove slowly at the Israeli positions on the Tel, and the Israelis responded by pinning the Jordanians with long-range tank and artillery fire (as well as some friendly fire from the Iraqi artillery batteries that landed on the Jordanians). Then, elements of the two Israeli armored brigades conducted a double-envelopment of the Jordanian thrust. With the 40th Brigade boxed in on three sides by 60-70 Israeli Centurions, the Jordanians began taking heavy losses. The Jordanian tanks fought well as individual crews, but their infantry contributed little to the battle and the Jordanian units were unable to coordinate their actions or develop a coherent response to the Israeli pincer attack. Eventually, the Jordanians simply fled the battlefield, losing 28 of 80 tanks without doing any significant damage to the Israelis.<sup>194</sup>

When the Iraqis did finally attack later in the morning of 16 October, the Israelis were able to concentrate their entire *ugdah* against them. Without the threat of the Jordanians to the west, the Israeli division commander brought the 17th Armored Brigade south and then swung it east, into the right flank of the Iraqi attack. The Iraqis were severely mauled in this battle, losing 60 of 130 tanks.<sup>195</sup>

After the fighting on 16 October the Jordanians pulled back to lick their wounds. They were left in relative peace throughout 17 and 18 October because Iraqi and Syrian probes and artillery exchanges kept the Israelis busy. The Jordanians repaired damage to their armored vehicles and brought up replacements for dead and wounded personnel. In addition, the Jordanians demanded to be resubordinated to another division because they no longer wanted to be under Iraqi command. Between the inability of the Iraqis to get moving according to the plan, and their accidental shelling of the Jordanians as the 40th Brigade approached the Israeli lines, the Jordanians wanted no more part of the Iraqi army, and they succeeded in forcing Damascus to place them under the command of the Syrian 9th Infantry Division, deployed to the southwest of their sector. Finally, after the disaster of 16 October, the King apparently decided to reinforce his contingent in Syria and ordered the 92nd Armored Brigade to join the 40th Armored Brigade.<sup>196</sup>

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<sup>193</sup> Dupuy, pp. 532-533; Ofer, 119-120; O'Ballance, *No Victor, No Vanquished*, pp. 199-201.

<sup>194</sup> Dupuy, p. 533; El-Edroos, pp. 519-520, 523-524; Herzog, *The Arab-Israeli Wars*, pp. 302-303; O'Ballance, *No Victor, No Vanquished*, pp. 201-207; Ofer, pp. 125-130, 223-224.

<sup>195</sup> Dupuy, pp. 532-533; Herzog, p. 303; O'Ballance, *No Victor, No Vanquished*, pp. 202-203; Ofer, 119-120.

<sup>196</sup> El-Edroos, pp. 520, 524-525; Ofer, pp. 224-225.



The Jordanians went into battle again on 19 October.<sup>197</sup> The Syrians had planned another large-scale attack in which the Jordanians would form the left flank and attack northwest into the "corner" of the Israeli lines as they turned south just east of al-Qunaytarah. The Iraqis again would be the right flank of the offensive, and would attack northward to the east of the Jordanians, while elements of a Syrian infantry division waited to serve as an exploitation force. The 92nd Armored Brigade had not arrived yet, so the 40th Armored Brigade, slightly reinforced to about 60 tanks would comprise the entire Jordanian effort.<sup>198</sup>

This Jordanian offensive failed as well, although not as badly as on 16 October. Once again, the attack was scheduled to begin at first light, but this time the Jordanians did not attack on time.<sup>199</sup> This exposed the Iraqis to the full attention of the Israelis, who sent them reeling with heavy losses. When the Jordanians finally did get moving at about 0900 hours, the Israelis were still dealing with the Iraqis, so the understrength 40th Armored Brigade faced only the understrength Israeli 19th Armored Brigade (30-40 tanks). Colonel al-Majali split his two tank battalions, sending one to the northeast around the dominating height of Tel al-Harrah and the other to the northwest of this hill while his mechanized brigade hung back in reserve. At this point, al-Majali delegated operational authority to his battalion commanders, leaving them to "act on their own judgment and initiative," and mostly failed to provide more than rudimentary guidance.<sup>200</sup>

Both Jordanian armored battalions fared poorly, but because they had learned caution after their experience on 16 October, they were not beat up as badly this time. The western armored battalion was able to penetrate all the way to the important Umm Batinah-Jabah road because the Israeli battalion at Umm Batinah mistook them for Israelis (the Jordanians had the exact same equipment as the Israelis: Centurion tanks and M-113 APCs). Nevertheless, when the Israelis realized their mistake they opened fire on the Jordanians. The Jordanian tank crews fought well but once again they were not as good as the Israelis and could not coordinate their actions to mount a coherent scheme of battle. The Jordanians quickly began losing more tanks than the Israelis, prompting them to disengage and retreat. Meanwhile, the eastern armored battalion probed forward very carefully, moving slowly and keeping both an advance guard and flank guards to prevent the Israelis from enveloping them as they had on 16 October. However, when the western armored battalion was forced to pull back, this allowed the Israelis to concentrate their entire brigade on the eastern battalion. They pinned the Jordanians with fire from the front, and then performed a double-envelopment just as the Jordanians had feared. However, this time, because the Jordanians were so nervous about the Israelis pulling just such a stunt, they began to retreat as soon as they became aware of the Israeli flanking maneuvers. During this entire time, the Jordanian mechanized infantry battalion hung back, occupying itself with minor tasks like evacuating the wounded, but never going into battle to aid the Jordanian armor. Overall, the Jordanians lost 17-20 tanks in this battle in exchange for four or five Israeli tanks.<sup>201</sup> Although the Iraqis would make two more

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<sup>197</sup> Please note that most accounts of the October War mistakenly claim this attack took place on 18 October. However, the various Iraqi and Israeli accounts in the Ofer study all state that the battle took place on 19 October. I have accepted the Ofer version as being the most authoritative because it was prepared for the Israeli General Staff using a translation of the official Iraqi General Staff study of their operations during the war plus articles that appeared in the Israeli General Staff journal *Ma'arachot*.

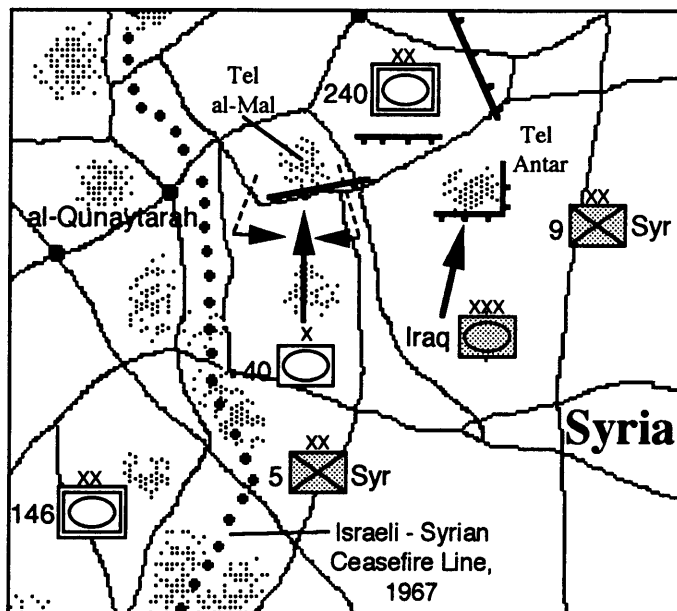
<sup>198</sup> Dupuy, p. 534; Herzog, *The Arab-Israeli Wars*, p. 304; O'Ballance, *No Victor, No Vanquished*, pp. 203-207; Ofer, pp. 226-228.

<sup>199</sup> For a list of possible reasons as to why the Jordanians started late on 19 October, see Ofer, p. 227.

<sup>200</sup> Herzog, *War of Atonement*, p. 142; O'Ballance, *No Victor, No Vanquished*, p. 209; Ofer, pp. 142-143, 226-228.

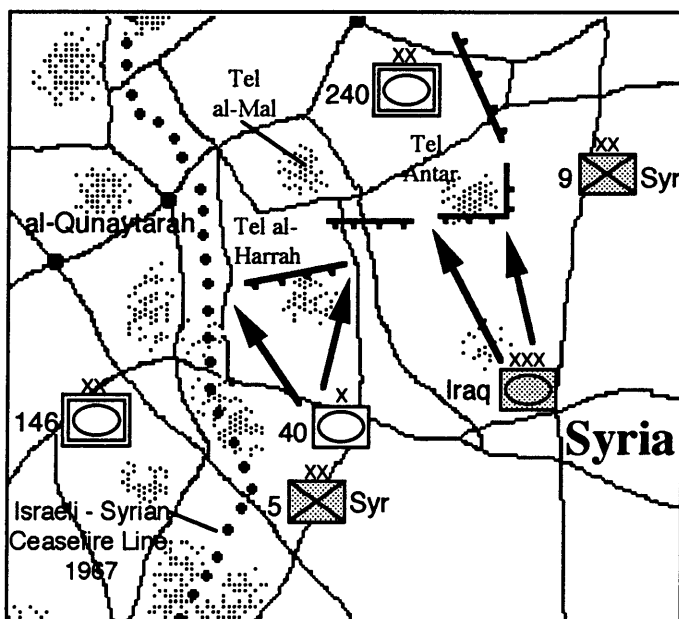
<sup>201</sup> Herzog, *The Arab-Israeli Wars*, p. 304; Herzog, *War of Atonement*, p. 142; O'Ballance, *No Victor, No Vanquished*, pp. 207-210; Ofer, pp. 226-229.

### Jordanian Operations, 16 October 1973



- ← - Arab Attacks, 16 October
- ➔ - Israeli Counterattacks, 16 October
- ▬ - Israeli defensive lines, 16 October
- - Jordanian Units
- ◻ - Israeli Units
- ▨ - Allied Arab Units

### Jordanian Operations, 19 October 1973



- ← - Arab Attacks, 19 October
- ▬ - Israeli defensive lines, 19 October
- - Jordanian Units
- ◻ - Israeli Units
- ▨ - Allied Arab Units

sallies against the Israelis that day--and would fail both times--after 19 October, the front in southern Syria settled into a desultory stalemate. Both sides sniped at each other and occasionally jockeyed for tactical positions, but there were no major efforts. The Syrians were content to continue to reconstitute their forces. Likewise, the Iraqis had been badly butchered between 12 and 19 October and they needed time to regroup and repair their damage. The Jordanian 92nd Armored Brigade arrived in Syria, but Amman felt that it had fulfilled its obligations and after the losses sustained by the elite 40th Armored Brigade, they had no desire to mix it up with the Israelis again. Consequently, there was little resistance from Jordan when a ceasefire ended the war on 24 October.<sup>202</sup> Altogether, the Jordanians had 54 tanks destroyed and suffered at least 80 casualties in the war.<sup>203</sup>

### **General Observations on Jordanian Military Effectiveness During the October War**

As noted previously, it is difficult to draw many conclusions from Jordanian performance in the October War. Amman sent the 40th Armored Brigade to Syria to avoid condemnation from its majority Palestinian population and its Arab allies, not to destroy Israel. Consequently, Jordan lacked the commitment to the war effort of Egypt, Syria, or even Iraq. Nevertheless, the Jordanian experience is not wholly without lessons. Of greatest importance, it gives offers further evidence of the decline in tactical effectiveness of Jordanian forces since the departure of the British.

Colonel al-Majali and his battalion commanders were mediocre leaders. First, al-Majali does not seem to have understood his government's intentions when they sent his unit to Syria. Amman did not want its best brigade destroyed by the Israelis, instead they wanted the 40th to participate, defend Syrian territory, but avoid serious losses at all costs. However, al-Majali's decision to go ahead with the attack on the Israelis on 16 October *without the Iraqis* was not just stupid, it clearly contradicted Amman's wishes. By charging the Israeli lines alone, the Jordanians gave the Israelis the perfect opportunity to maul the 40th Armored Brigade, which is exactly what they did, destroying 28 of 80 Jordanian Centurions. It seems reasonable to surmise that al-Majali probably got chewed out by the General Staff for this idiocy, and so on 19 October, he waited until he was certain the Iraqis had attacked before he committed his own units. However, in this battle as well, he performed very poorly. He divided his brigade into three forces and then left them on their own, providing inadequate guidance and failing to coordinate the operations of his battalions so that they could support one another. The Jordanian battalion commanders were also incapable of coordinating their efforts and wandered off in different directions so that they were unable to come to each other's aid when they were engaged by the Israelis in turn. Finally, the mechanized infantry battalion was allowed to sit back during the entire battle doing essentially nothing, even while both of the armored battalions were being hammered by the Israelis.

These mistakes pointed to some of the other problems the Jordanians experienced. While the Israelis consistently commented that Jordanian tank crews were very professional, they still weren't as good as the Israelis and were regularly beaten whenever they came to grips with Israeli armor. Of greater importance still, the Jordanian units had

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<sup>202</sup> Dupuy, pp. 534-536; O'Ballance, *No Victor, No Vanquished*, pp. 211-219; Ofer, pp. 229-231.

<sup>203</sup> Dupuy, p. 608; Herzog, *The Arab-Israeli Wars*, p. 306. The figure of 80 casualties is from Dupuy. No other source, including El-Edroos even mentions a casualty figure, and Dupuy's number strikes me as low, if only because of the fairly large number of tanks the Israelis destroyed. Although it is true that Jordan failed to employ its infantry along with its tanks, and this probably kept down manpower losses, it seems highly unlikely that the Jordanians could have lost 54 tanks and suffered only 80 dead and wounded. In addition, tanks are simply the only category of vehicle we have data for on the Jordanian side and it is a virtual certainty that the Israelis destroyed other Jordanian vehicles, such as APCs, trucks and jeeps. Consequently, my guess is that the actual Jordanian casualty figures were two or three times greater than the number Dupuy cites.

great difficulty fighting as units. As individual tanks they were alright, but they could not coordinate their actions to defeat Israeli moves. Just as they had in the Six-Day War and at al-Karamah, when they faced an Israeli flanking maneuver, the Jordanians fought back fiercely as individuals, but could not react as units to reorient themselves against the new Israeli threat. With the exception of the eastern armored battalion on 19 October, the Jordanians failed to employ flankguards or advance guards despite the Israeli predilection for envelopment. The Jordanian units also generally did not maneuver against the Israelis. They mostly attacked right at Israeli positions and then retreated when the Israelis got on their flanks.

Jordanian combined arms coordination was awful. Initially, the Jordanians did not deploy with any tube-artillery (just two batteries of multiple-rocket launchers) and so had to rely on the Iraqis and Syrians. Even when they sent a battalion of 105 mm howitzers to Syria, these guns had little effect on the Israelis. Worst of all, the Jordanians never employed their infantry in conjunction with their armor. The Israeli units were mostly all-tank, with little infantry support and so were very vulnerable to a true combined arms team of artillery, armor, and infantry with anti-tank weapons. In addition, in some cases the Jordanians were battered by a few small Israeli anti-tank teams, but never brought up their infantry to clear these positions.

### **Jordanian Military Effectiveness Since 1973**

The Jordanian armed forces have not seen combat since 1973. Consequently, it is difficult to discern their military effectiveness between the October War and the present. However, here as well, some observations are possible. Western contact with the Arab Legion has remained very close, and in the last two decades, American ties to the Jordanian military have continued to expand.<sup>204</sup> As a result, a number of accounts of Jordanian training, doctrine and exercises are available from which to try to gauge the capabilities of Amman's military since 1973.

In general, these sources describe a continuing slow erosion of Jordanian capabilities. To some extent this is a result of financial difficulties that began to affect Jordanian defense beginning in the mid-1980s. The decline in global oil prices plus Jordanian policies that alienated some of the oil-rich Persian Gulf states resulted in a decline in Jordanian income. Meanwhile the cost of the American and European weapons the Jordanians desired continued to rise, forcing Amman to forego additional expansion and to slow down modernization programs.<sup>205</sup> However, by the same token, earlier Jordanian economic and educational policies began to pay off with a fairly remarkable increase in Jordan's socio-economic development, such that by 1990 Jordan had surpassed most of the other Arab states in terms of its level of development. In particular, the education and health levels of Jordan's soldiery have increased very significantly across the board, although they have not yet reached Western levels.<sup>206</sup> Meanwhile, politicization, in all of its various forms, remained at roughly the same low levels as it had been throughout the post-1967 period because Amman stuck to the same

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<sup>204</sup> On Jordan's increasing reliance on US equipment and methods, see Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), p. 312; Keegan, p. 397; Levan and Eytan, pp. 167-172.

<sup>205</sup> Cordesman, *Jordanian Arms*, pp. 2-8, 44, 52; author's interviews with US military personnel, May 1993.

<sup>206</sup> See Chapter 5, page 5 above, for a summary of these indicators and the increase in development between 1960 and 1990. Also, see Cordesman, *Jordanian Arms*, pp. 1, 13, 21-27, 52; Day, pp. 94-116; Richards and Waterbury, esp. pp. 208-209; Satloff, p. 63.

patterns of favoring Bedouin for recruitment and promotion.<sup>207</sup>

### **Lingering Strengths**

The Jordanian army still has a number of advantages it relies on to produce higher military effectiveness than other Arab armies. Although the King was forced to introduce some conscription to fill out specific areas of the force structure (principally disciplines requiring technical skills) this remains very low, usually comprising less than ten percent of the entire force. The other 90 percent are volunteers who still typically serve for many years, even decades, at all ranks.<sup>208</sup> Army service is still considered very prestigious, especially among the East Bankers, although it is no longer as economically rewarding as it once was because of the decline in Amman's defense budgets and the simultaneous growth of the Jordanian economy.<sup>209</sup> Finally, the impact of the British remains an important, if fading, influence on Jordanian traditions and practices.<sup>210</sup>

These features have helped the Jordanian military to retain a number of important strengths. First, because the majority of personnel are volunteers who serve for extended tours, Jordanian training is very tough and Jordanian soldiers can be constantly trained for many years. In the British tradition, the Jordanians use these advantages to concentrate their efforts on creating the highest quality soldiers available, and as individual soldiers the Jordanians remain quite good. Jordanian personnel stress individual military skills, discipline, and the care and maintenance of individual weaponry in a manner totally foreign to most Arab militaries. Jordanian units emphasize the combat skills, discipline, and readiness of individual soldiers that is a hallmark of the British military system. Jordanian training emphasizes the development of its personnel as professional soldiers, and this training is frequent and strenuous. Finally, Jordanian training stresses the objective communication of information, inculcating the notion that the honor of a Jordanian soldier demands accuracy in reporting to his superiors.<sup>211</sup>

### **Growing Problems**

Nevertheless, the areas of difficulty increasingly outnumber and outweigh the Legion's strengths. These problems generally exist where the advantages of the small, professional force and those of the lingering British traditions have the least impact. Jordanian exercises and training have become increasingly scripted, and Jordanian officers are loathe to deviate from their training scripts, even when exercising with Western military personnel. As in other Arab armies, Jordanian troops and officers are terrified of being criticized and their preferred course of action is usually to conform rigidly to their plans and wait for orders from higher headquarters. Jordanian forces are best when performing as small, self-contained units and experience increasing difficulty with larger operations requiring coordinated action. Although higher-level Jordanian officers recognize the importance of combined arms operations, the same recognition is not as prevalent among junior officers. Sub-elements of Jordanian combined-arms units do not regularly train together, nor are they provided with the necessary communications

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<sup>207</sup> On continuing low-levels of politicization, see Day, p. 81; Gabriel, p. 29; John Keegan, *World Armies*, (London: Macmillan, 1979), p. 392-393; Mutawi, p. 44.

<sup>208</sup> Cordesman, *Jordanian Arms*, pp. 3, 44, 52; Gabriel, p. 34.

<sup>209</sup> Gabriel, p. 34; author's interviews with US military personnel, May 1993.

<sup>210</sup> Author's interviews with US military personnel May 1993.

<sup>211</sup> Anthony Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, (Lanham, MD: University Press, 1987), p. 136; Cordesman, *Jordanian Arms*; Anthony H. Cordesman, *After the Storm: The Changing Military Balance in the Middle East*, (Boulder, CO: Westview, 1993), pp. 286-300; El Edroos, esp. 250-281, 311-313, 414-426; Gabriel, p. 39; Keegan, p. 393; Metz, p. 252; author's interviews with US military personnel May 1993.

for good combined arms cooperation.<sup>212</sup>

Several broader judgments can be rendered on Jordanian abilities post-1973. First, while they remain quite good as individual soldiers and even very small units, such as sections or squads, their effectiveness decreases rapidly in larger formations. Thus Jordanian units really cannot operate above the brigade level, and from platoon to battalion level, Jordanian units are mostly inflexible, slow to react, uncoordinated, and unimaginative especially on the offensive. One US military officer who trained with the Jordanians observed that beyond individual combat, military concepts "get lost" by Jordanian units which evinced "an inability to grasp the larger concepts of modern war."<sup>213</sup> Second, while Jordanian units remain very skillful and determined when fighting a set-piece defense, they rarely show the same skill fluid maneuver battles. They generally try to avoid fluid situations and do not practice unstructured assaults or meeting engagements. Even El Edroos, admits that Jordanian units have performed much better in static defense operations than in maneuver warfare.<sup>214</sup>

The Jordanians also have problems in various technical disciplines despite the considerable improvement in Jordanian socio-economic levels and the increasing recruitment of the more urban and technologically-skilled Palestinians. Between 1970 and 1990, the Jordanian armed forces increasingly turned to its Palestinian population in recognition of the growing need for technical skills on the battlefield as military technology grew ever more sophisticated.<sup>215</sup> Nevertheless, Jordanian maintenance practices are not much better than those of other Arab militaries. Western military analysts fear Jordanian vehicles and weapons will break down after a few days of fighting, and Jordanian training often neglects basic maintenance practices.<sup>216</sup> Moreover, US military personnel generally have concluded that Jordanian trainees routinely require longer than US specifications normally allow to master technically demanding tasks.<sup>217</sup> These difficulties with technology have placed limits on Jordan's force structure. For example, many analysts estimate that Jordan lacks the technical base to operate more than a handful of sophisticated helicopters and probably cannot adequately operate and support the 2,000 armored vehicles and 100+ combat aircraft currently in its arsenal.<sup>218</sup>

### **Summary: Jordanian Military Effectiveness 1947-1991**

The combat performance of the Jordanian armed forces changed markedly after 1956. From 1948 to 1956, the Arab Legion was far superior to any of the other Arab militaries. In battle, it generally gave as good as it got, and the Israelis considered it their most dangerous adversary. However, after 1956, Jordanian capabilities began to decline. In 1967, the Jordanians performed worse than in 1948, although the exceptional performance of the elite 40th Armored Brigade and a number of foolish Israeli mistakes helped to disguise this deterioration to some extent. Thereafter, Jordanian capabilities continued to gradually erode. By the 1990s, the Jordanian military still retained a number of advantages over the other Arab militaries, but they were fewer in number and of less magnitude than ever before.

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<sup>212</sup> Author's interviews with US military personnel, May 1993.

<sup>213</sup> Author's interviews with US military personnel, May 1993. Also see, Cordesman, *Jordanian Arms*, p. 46.

<sup>214</sup> El Edroos, pp. 366, 385, 427, and 455.

<sup>215</sup> Satloff, p. 63.

<sup>216</sup> Day, p. 81.

<sup>217</sup> Pascal, et. al., p. 46.

<sup>218</sup> Cordesman, *Jordanian Arms*, pp. 68, 77; Levran and Eytan, p. 172.

### *Changing Patterns*

In a number of important areas, Jordanian forces displayed considerably greater capabilities before 1956 than afterwards. While under British tutelage, the Arab Legion demonstrated excellent combined arms coordination, their junior officers were aggressive and independent-minded (even to a fault), they counterattacked in force and with determination. Jordanian units often employed maneuver at tactical levels, frequently attempting to take an objective or defeat an opponent by outflanking them or otherwise trying to place them in a disadvantageous spatial or geographic position. Jordanian artillery fire was pretty accurate and could shift to provide support in response to battlefield developments. Jordanian units conducted frequent, aggressive reconnaissance operations and were reasonably good at passing information both up and down the chain of command. Operational authority was highly decentralized with local commanders having responsibility and making decisions for the vast majority of events in their sectors.

By the Six-Day War, each of these patterns had faded, if not disappeared altogether. With a few notable exceptions, Jordanian commanders were mostly passive, unimaginative, and unwilling to exercise independent judgment. In particular, Jordanian forces consistently proved unable or unwilling to adapt to changing circumstances. They often failed to counterattack or even reorient their defenses in reaction to a successful enemy attack, with the result that they were destroyed piecemeal. Jordanian attacks increasingly took the form of frontal assaults, showing little creativity or subterfuge. Jordanian artillery fire became less and less able to shift its fire or perform more sophisticated missions such as counter-battery fire. It became a rarity for Jordanian commanders to pay adequate attention to reconnaissance, to scout the route ahead of their forces, or to employ flankguards when necessary and Jordanian units increasingly fell prey to ambushes or surprise flanking moves. At least between 1956 and 1967 (and especially during the Six-Day War), the Jordanians suddenly experienced horrendous problems with misinformation being passed throughout the command structure. Command and control procedures grew ever more centralized, with the General Staff responsible for ever greater numbers of decisions.

### *Constant Patterns*

Nevertheless, there were also patterns of combat effectiveness which the Jordanians manifested both before and after 1956 with little apparent change. First, one must credit the sills of the individual Jordanian soldiers, whose bravery, discipline and individual skills remained at a high level throughout the postwar period. This proficiency was manifested in excellent marksmanship with small arms, good fire discipline, frequent acts of courage, and good hand-to-hand combat skills. In addition, the limited evidence available indicates that Jordanian air force pilots maintained a very high degree of competence in air-to-air and air-to-ground operations even well after 1956. Jordanian forces experienced some problems with unit cohesion in all of its wars, especially the Six-Day War, but more often than not, Jordanian formations hung together in difficult situations. Jordan's quartermaster corps and combat engineers never demonstrated any particular brilliance, but neither were they ever a significant drain on Jordanian operations. In general, it is safe to say they did what was asked of them, although they were never asked to perform miracles. Finally, Jordanian generalship remained mostly adequate throughout this entire period. Jordan's strategic leadership was occasionally quite good, such as after November 1970, and also occasionally quite bad, such as in September 1970. But overall, they performed competently. Jordan's generals may never have seized victory from the jaws of defeat, but they were never more than a small part of Jordan's military problems.

### Summary Chart of Jordanian Military Effectiveness, 1947-1991

Category	1948	1956	1966	1967	1967-70	1970	1973
Tactical creativity	Adequate	Poor	Poor	Poor	Poor	Poor	Poor
Strategic creativity	Adequate	--	--	Adequate	Good	Uneven	--
Information flows	Adequate	Adequate	Poor	Poor	--	Adequate	--
Tactical initiative	Good	Uneven	Poor	Poor	Poor	Poor	Poor
Strategic initiative	Adequate	--	--	Good	Good	Good	--
Centralization/Delegation	Good	Adequate	--	Poor	--	--	Poor
Simplicity of Chain of Command	Good	--	--	Poor	Adequate	Adequate	Adequate
Tactical use of maneuver	Adequate	Poor	Poor	Poor	Poor	Poor	Poor
Strategic use of maneuver	Adequate	--	--	Adequate	Good	Uneven	--
Employment of armor	Adequate	--	--	Poor	Poor	Poor	Poor
Employment of artillery	Good	--	--	Poor	Poor	Poor	Poor
Air-to-air combat skills	--	--	Good	Good	--	--	--
Air-to-ground operations	--	--	--	--	--	Adequate	--
Ad hoc operations	Good	Poor	Poor	Adequate	--	Poor	Poor
Set-piece operations	--	--	--	Adequate	Good	Good	Adequate
Combined arms	Good	--	--	Poor	Poor	Poor	Poor
Unit cohesion	Good	Good	--	Uneven	Good	Uneven	Good
Personal Bravery	Good	Good	--	Good	Good	Good	--
Maintenance and repair	Adequate	--	--	Poor	--	--	Poor
Assimilation of equipment	Adequate	--	--	Poor	Poor	Poor	Poor
Logistics	Adequate	--	--	Adequate	--	Adequate	--
Combat engineers	Adequate	--	--	Adequate	Good	Adequate	--
Technical support	--	--	--	Poor	Poor	Poor	Poor
Tactical intelligence	Good	Poor	Poor	Poor	Poor	Poor	Poor
Strategic intelligence	Adequate	--	--	Adequate	Good	Adequate	--
Operational Security	--	--	--	Adequate	Adequate	Poor	--
Tactical leadership	Adequate	Poor	Poor	Poor	Poor	Poor	Poor
Strategic leadership	Adequate	--	--	Adequate	Good	Uneven	--
Ability to Plan and Execute Complex Operations	--	--	--	Adequate	Good	Good	Adequate
Officer rotations	--	--	--	--	--	--	--
Morale (at the start of the war)	Good	Good	--	Adequate	--	Adequate	Adequate
Attention to training	Good	Good	Good	Good	Good	Good	Good
Emphasis of training	Good	Good	Good	Good	Good	Good	Good
Ability of soldiers to benefit from military training	Poor	Poor	Poor	Poor	Adequate	Adequate	Adequate
Preferred operational tempo	Moderate	Slow	Slow	Slow	Slow	Slow	Slow
Attention to offensive operations	Good	Good	Adequate	Adequate	Adequate	Adequate	Adequate
Attention to defensive operations	Good	Good	Good	Good	Good	Good	Good
Attention to air superiority	--	--	--	Poor	--	--	Poor
Unit and service coordination	Good	--	--	Poor	Adequate	Poor	Poor
Willingness to take casualties	Low	Low	Low	Low	Low	Low	Low

A blank square indicates that insufficient information was available to make a judgment in this category for the particular war.

457-37



## Chapter 9

### Syrian Military Effectiveness, 1947-1991

The Syrian Army was created by the French after World War I. France was given a mandate over the northern Levant, which it organized into the states of Syria and Lebanon. French rule was highly unpopular and faced constant friction from the general populace, punctuated by several outright revolts. In 1919, the French created the *Troupes Speciales du Levant* with 8,000 men which later grew into the Syrian and Lebanese armies. These units were used primarily as auxiliaries alongside French regulars. Senior officer billets were held by French personnel, although Syrians were allowed to hold the ranks below major. This force was intended almost wholly for internal security responsibilities as the French handled external security.<sup>1</sup>

The small Syrian army that developed during the interwar period was soon dominated by minority groups: Druze, Alawis, Christians, Circassians, and Kurds. The French favored the Christians as co-religionists and gave commissions liberally to the small Christian population. The French encouraged the other minorities to join the army--while discouraging the *Sunni* Arabs from doing so--as a means of controlling the country. Paris hoped that the Syrian minorities would feel dependent on the French for their position and security and so would defend French control of the country against the Sunni majority. In addition, the Syrian army was viewed as a tool of the French and so was not considered prestigious or fashionable among the more cosmopolitan Sunnis. Most Sunnis considered the army as a career only for the incompetent. By contrast, the army offered economic and social advancement to the minorities who clamored for the opportunity to enlist. By the Second World War, Syrian minorities were significantly overrepresented in the armed forces.<sup>2</sup>

### The War of Israeli Independence, 1947-1948

The Syrian military's first taste of combat was not a particularly auspicious start but neither was it as catastrophic as for some of the other Arab armies. Syria contributed most of its fairly meager military power to the Arab war effort against the nascent state of Israel. Syria also was one of the first to contribute troops and resources to the conflict.

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<sup>1</sup> Safiuddin Joarder, *Syria Under the French Mandate, The Early Phase: 1920-1927*, (Dacca: The Asiatic Society of Bangladesh, 1977), pp. 140-165, 169-176, 183-195; J. M. Moreaux, "The Syrian Army," *Defence Update*, No. 79, July 1986, [hereafter referred to as "Moreaux, July 1986"], p. 35; James Rudolph, "National Security," in Richard F. Nyrop ed., *Syria: A Country Study*, (Washington, DC: GPO, 1979), pp. 194-195; Nikolaos Van Dam, *The Struggle for Power in Syria: Sectarianism, Regionalism, and Tribalism in Politics, 1961-1978*, (NY: St. Martin's, 1979), p. 39.

<sup>2</sup> Alasdair Drysdale, "The Syrian Armed Forces in National Politics: The Role of the Geographic and Ethnic Periphery," in Roman Kolkowicz and Andrej Korbonski eds., *Soldiers, Peasants and Bureaucrats: Civil-Military Relations in Communist and Modernizing Societies*, (London: George Allen and Unwin, 1982), pp. 53-57; Moreaux, July 1986, p. 32; Naomi Joy Weinberger, *Syrian Intervention in Lebanon*, (NY: Oxford University Press, 1986), pp. 66-67; Van Dam, pp. 39-42.

Syrian forces had a number of significant strengths and weaknesses. Yet ultimately, Syria's successes were modest and its failures acceptable because Damascus committed its troops cautiously and attempted only very limited operations against the Israelis. Although neither commissarism nor praetorianism had reared its head in Syria's armed forces, palace-guardism was a dominant feature of the landscape. Like the other Arab states, Syria was terribly underdeveloped, the more so because its most urban and developed regions had been broken off as the new state of Lebanon. Finally, to the extent Damascus had any sort of military doctrine, it was heavily based on the practices of their former French overlords.

In 1947 the Syrian army was small, poorly armed, and poorly-trained. Paris relied primarily on French regulars to keep the peace in Syria and had largely neglected the small Syrian military. As a result, training had been lackadaisical, discipline lax, and staff work almost unheard of. In terms of quantitative strength, there were about 12,000 men in the Syrian army in 1947. These troops were centered on three infantry brigades and an armored force of about battalion or better size. In addition, the Syrians had an air force of about 50 aircraft, of which about ten were World War II-generation models and the rest were older. Syrian ammunition stocks were so inadequate that the quartermasters initially could provide only a few hundred rounds of ammunition for each soldier sent to Palestine.<sup>3</sup>

### **Syrian Operations with the Arab Liberation Army**

Even before the Arab League resolution to attack Israel, Syria began participating in the conflict by sending large numbers of men as well as considerable arms and provisions to the Arab Liberation Army (ALA), led by the Syrian Fawzi al-Kaukji. Indeed, the Syrians were largely responsible for creating the ALA and soliciting contributions to it from other Arab countries. The Syrians themselves committed 2,500 "volunteers" comprising about one-third of the ALA and essentially all of its Northern Command forces, which came under Kaukji's personal control. The other commands--the Southern, Eastern and Western commands--were manned largely by Iraqis, Palestinians, and Lebanese and were commanded by Kaukji's lieutenants.<sup>4</sup>

In February 1948, Kaukji's Syrian-dominated Northern Command launched its first offensive in the Beisan (Bayt She'an) valley of Galilee against the Israeli settlement of Tirat Zvi. Kaukji's force of over a battalion in strength greatly outnumbered the poorly-armed defenders. However, the ALA units launched a frontal assault on the Kibbutz's defensive positions in the rain. The Israelis beat back several such charges, before they sent out a small force which caught the ALA in the flank when they launched their next attack. Surprised by this unexpected turn of events, Kaukji's men fled, leaving 60 dead and large numbers of equipment on the battlefield.<sup>5</sup> Edgar O'Ballance commented on this clash that "the Arabs had shown much individual bravery, but little tactical skill."<sup>6</sup>

By April, Kaukji's army had regrouped and was ready for another try. At this point, he apparently had realized that his original goal of actually "liberating" Israel was unrealistic, and instead had set his sights considerably lower: he simply wanted to take one Israeli settlement, which he could then tout as a great victory for propaganda

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<sup>3</sup> Col. Trevor N. Dupuy, *Elusive Victory*, Paperback Edition, (Dubuque, IA: Kendall Hunt, 1992), p. 17; Rudolph, p. 195; Patrick Seale, *The Struggle for Syria: A Study of Post-War Arab Politics, 1945-1958*, (London: I.B. Tauris and Co. Ltd., 1965), p. 33.

<sup>4</sup> Dupuy, pp. 13-14, 41; Lt. Col. Natanel Lorch, *The Edge of the Sword: Israel's War of Independence, 1947-1949*, (NY: G.P. Putnam and Sons, 1961), p. 80; Edgar O'Ballance, *The Arab-Israeli War, 1948*, (London: Faber and Faber Ltd., 1956), pp. 36-39, 84.

<sup>5</sup> Chaim Herzog, *The Arab-Israeli Wars*, (NY: Random House, 1982), p. 25; O'Ballance, *The Arab-Israeli War*, pp. 39-40.

<sup>6</sup> O'Ballance, *The Arab-Israeli War*, p. 40.

purposes. This time the ALA struck at the small Israeli settlement of Mishmar Ha'Emeq, southeast of Haifa. Kaukji assembled over 1,000 troops with a battery of Syrian 75 mm howitzers. The Israelis had a handful of defenders with one light machine gun, a few mortars, and not even enough small arms to go around. In the early morning of 4 April, the Syrian artillery began a bombardment that seriously damaged the buildings of the settlement but had little impact on the defensive positions. Soon after the shelling began, Kaukji launched an infantry assault into the main Israeli defensive lines. Despite their dearth of heavy weapons, the Israelis were able to stop the assault short of the settlement's fence before nightfall. During the night, an Israeli company reinforced Mishmar Ha'Emeq. The next day Kaukji contented himself to simply bombard the settlement, hoping this alone would compel the Israelis to surrender, but the shelling was very inaccurate and did little damage to the defenders. On the following day a small British force arrived and imposed a 24-hour ceasefire to allow the Jewish women and children to be evacuated.<sup>7</sup>

By the time the ceasefire elapsed, the Israelis had brought up additional reinforcements in the form of the 1st Palmach battalion commanded by Major Dan Laner. The Israeli commander decided not to use this force to counterattack Kaukji's army because the ALA was too large and well-armed. Instead, the Palmach battalion set out from En HaShofet southwest of Mishmar Ha'Emeq and headed east, completely outflanking Kaukji's force and occupying some of the Arab villages on the ridgeline east of Mishmar Ha'Emeq, across which ran the ALA's line of supply. This Israeli move caused Kaukji to panic and turn back to try to retake the captured villages on the ridgeline. For the next week, the ALA and the Haganah forces fought for control of these villages. During the day the Syrians were generally able to bring their superior numbers and firepower to bear to force the Israelis out of a position, only to lose it again when the Palmach counterattacked at night. By 12 April the Israelis had secured their control over most of the ridge. Kaukji then tried to launch a renewed attack on Mishmar Ha'Emeq to try to draw off the Israeli forces on the ridgeline, but his units failed to adequately scout their route and were ambushed. Meanwhile, the Israelis had continued to push around the ALA's eastern flank, and after two more villages fell Kaukji apparently realized that he was virtually encircled. At that point, he was forced to pull out of Galilee altogether, extricating himself from the Israeli noose only with great difficulty.<sup>8</sup>

Thereafter, the ALA northern command remained mostly passive. Kaukji was badly shaken by his near annihilation around Mishmar Ha'Emeq. He retired to Lebanon and sent much of his command, including his artillery, to aid the Arab efforts around Jaffa and Jerusalem. For the rest of the war, ALA Northern Command operations were small and inconsequential. Meanwhile, on 14 May 1948 the main Arab armies invaded Palestine. Many of the "volunteers" previously under ALA control were recalled by their governments to fight with their own expeditionary forces, including most of Kaukji's Syrian contingent. For the rest of the war, the forces under his command were largely Palestinians, Lebanese, and non-Arab Muslims. Later in 1948, the Israelis defeated his remaining forces in a series of offensives that drove them out of Palestine altogether.<sup>9</sup>

### **Operations of the Syrian Army in Palestine**

On 14 May 1948, the Syrian Army invaded Palestine as part of the coordinated Arab League effort to snuff out the state of Israel before it could establish itself. The initial Syrian thrust was directed along the southern shore of the Sea of Galilee (Lake

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<sup>7</sup> Dupuy, p. 24 Herzog, *The Arab-Israeli Wars*, p. ;27 Lorch, p. 93.

<sup>8</sup> Dupuy, pp. 24-25; Herzog, *The Arab-Israeli Wars*, pp. 27-28; Lorch, pp. 94-95; O'Ballance, *The Arab-Israeli War*, pp. 42-44.

<sup>9</sup> Dupuy, pp. 60, 83-87, 100-104; Herzog, *The Arab-Israeli Wars*, pp. 35, 42, 47-48, 55-56, 76-79, 89-91, 707.

Kinneret). In support of this move, the Syrians set up a logistics depot near the B'nat Ya'acov Bridge north of the Sea of Galilee. As the Syrians had hoped, the Israelis detected this and took it as a sign that the Syrians were going to make their major thrust in that area. Consequently, the few Israeli mobile units in eastern Galilee were deployed north of Lake Kinneret to guard against the expected attack at the B'nat Ya'acov bridge and few defenders were left south of the Sea of Galilee to defend against the main Syrian attack.<sup>10</sup>

Nevertheless, the Syrian thrust south of the Kinneret proved to be something less than a juggernaut. The Syrian 1st Infantry Brigade, supported by Syria's entire armor corps--consisting of a battalion of armored cars and a company of French tanks--an artillery battalion, and other units first attacked the Israeli village of Zemach. During the night of 15/16 May the Syrians attacked Zemach with infantry supported by armored cars. The infantry moved south of the town to try to flank the Israeli defenses, but the Israelis saw the move and were able to shift forces to block it, at which point the Syrians fell back to regroup. In the meantime, the Israelis established hasty defenses at Zemach and, more importantly, began work on more extensive fortifications in the twin Deganyah villages to the west of Zemach, which guarded the way to the bridge across the Jordan at Deganyah Alef. On the morning of 18 May the Syrians renewed their assault on Zemach. This time, the infantry hung back and the tanks and armored cars advanced alone supported by heavy artillery fire. The Syrian artillery had used the two days respite to advantage and their initial volleys were very accurate. The Syrian armor again swung south of the town, and this time the Israelis were unable to block them because they had only two 20 mm anti-tank guns. The Syrians forced the Israelis to abandon the town and retreat back to the Deganyah positions.<sup>11</sup>

With the fall of Zemach to Syrian armor and artillery, Tel Aviv realized it faced a serious threat south of Kinneret. The Israelis scraped together reinforcements from all over eastern Galilee and sent them to the Deganyahs under the command of Major Moshe Dayan, who had grown up there. Dayan attempted a counterattack on Zemach but the Syrians fought back hard and repulsed the Israelis.<sup>12</sup>

The Syrians began their assault on the Deganyahs before dawn on 20 May. The assault was very poorly coordinated at almost every level. First, the Syrians failed to synchronize the timing of their attacks on both villages, with the result that the attack on Deganyah Alef started hours before the attack on Deganyah Bet. At Deganyah Alef, the Syrians committed an infantry company supported by artillery, armored cars and half the Syrian tank force in a frontal assault against 70 Israeli defenders. Although the Syrian units began moving in tandem, the armor quickly outpaced the infantry and ended up attacking the Israeli lines first. The Israelis had very few anti-tank weapons and so the Syrian tanks and armored cars were able to break into the settlement itself, where they were stopped by determined Israeli resistance. The Israelis knocked out three tanks and four armored cars with Molotov cocktails, Piat shoulder-fired anti-tank weapons, a 20 mm gun, and even a 3-inch mortar employed as a direct fire weapon. When the Syrian infantry arrived, their tanks had been defeated and were beginning to retreat. The Israelis were then able to redirect their fire on the infantry, and seeing the armor retreating, the Syrian infantry fell back as well.<sup>13</sup>

The attack on Deganyah Bet showed that the Syrians had learned some lessons from their mistakes earlier in the day. In this assault, the Syrians were careful to have

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<sup>10</sup> Dupuy, p. 49.

<sup>11</sup> Dupuy, pp. 47-48; Herzog, *The Arab-Israeli Wars*, pp. 50-51; Lorch, pp. 147-150; O'Ballance, *The Arab-Israeli War*, pp. 110-111.

<sup>12</sup> Dupuy, p. 48; Herzog, *The Arab-Israeli Wars*, pp. 51-52; Lorch, p. 151.

<sup>13</sup> Dupuy, p. 48; Herzog, *The Arab-Israeli Wars*, pp. 52-53; Lorch, pp. 152-153; O'Ballance, *The Arab-Israeli War*, p. 111.

their armor keep pace with the infantry. Nevertheless, they again conducted a frontal assault which the Israelis beat back after a short battle. The Syrians were regrouping for another attack when unexpected Israeli reinforcements appeared: two field guns that had arrived in Tel Aviv only days before. These guns began firing on the Syrian units around Zemach as they formed up for another attack on the Deganyahs. The Israeli crews had never fired their guns before and so their accuracy was poor. However, their mere presence had a disproportionate effect on the Syrians. The sudden appearance of Israeli artillery after having a total monopoly on heavy weapons for the last week unnerved the Syrians. In addition, the Syrian forces around Zemach were very low on ammunition and the resupply they had been promised was diverted to the Syrian 2nd Brigade operating north of the Sea of Galilee. In response to these developments, the Syrians withdrew back to Syria.<sup>14</sup> They abandoned their positions in front of the Deganyahs, as well as Zemach, and retreated back to the foothills of the Golan. Indeed they even left behind a number of lightly damaged or otherwise inoperable tanks that the Israelis were able to recover and repair. Although the Syrians still outnumbered the Israelis by a wide margin in this area--especially in artillery and armor--they never again attacked there.<sup>15</sup>

After their defeat south of the Sea of Galilee, the Syrians redirected their attention to the B'nat Ya'acov bridge area north of the Kinneret. The Syrians had planned to launch a supporting attack in this area around 22 May. However, when the Israelis realized that the main Syrian attack was coming south of the Sea of Galilee, they sent a company of the Yiftach brigade across the Jordan which overpowered the Syrian forces protecting the supply depot near the B'nat Ya'acov bridge and destroyed the Syrian provisions. This loss forced the Syrians to delay their offensive north of Kinneret until logistical stocks could be rebuilt to support the operation.<sup>16</sup>

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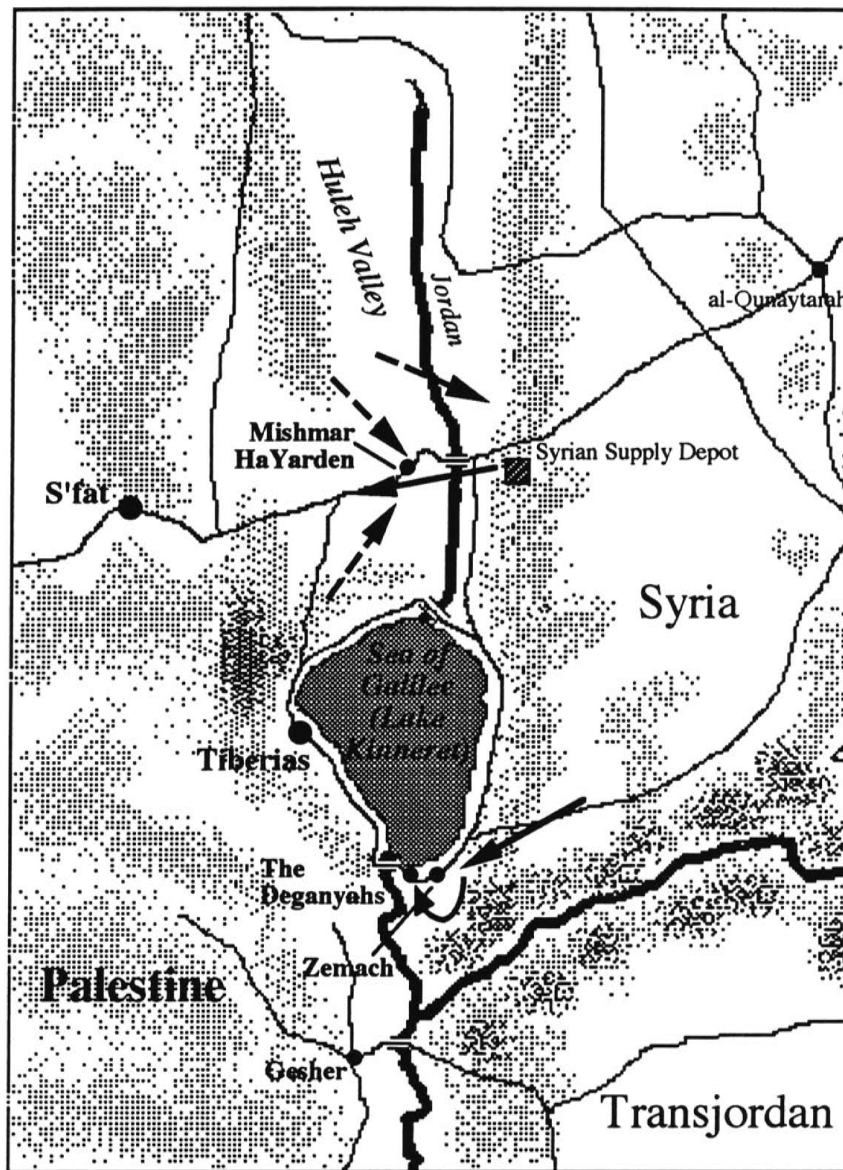
<sup>14</sup> The Syrian version of the story is that they purposely withdrew from the Zemach-Deganyah area because they already had decided to redirect their efforts north of the Kinneret. In particular, they claim that the diversion of supplies north to the B'nat Ya'acov area reflected this change in priorities. I find this version of events hard to reconcile with the available evidence. First, the Syrians agree that the supply depot set up in the north was to divert Israeli attention from the south, indicating that at least as late as 15 May the Syrian main effort was in the south. Second, the Israelis destroyed this depot on the night of 17/18 May while during the preceding day the Syrians succeeded in conquering Zemach, which was considered a major Arab victory and a huge Israeli defeat. Damascus believed that it was on the verge of clearing the western shore of the Sea of Galilee and perhaps cutting off Galilee from the rest of Israel. Thus it is also highly unlikely that by 19 May (when Zemach had been secured) the Syrians had changed their mind and decided to redirect their effort to north of Galilee: quite the contrary, at that point the Syrians were pushing everything they could to their southern front because of the success they were enjoying there.



The attack on the Deganyahs was conducted the very next day--20 May--and there is absolutely no reason to believe that the Syrians had changed their minds overnight and decided to redirect their efforts north of Kinneret. Indeed, up until the failure of the attacks on the Deganyahs, the Syrians were confident that they would break through and push into Galilee, and the Israelis were very uncertain they could stop the Syrians. Another bit of evidence supporting this interpretation is that the supplies redirected to the north were originally intended for the units assaulting the Deganyahs. These provisions were slated to go to the Syrians in this sector all along and only after the failure of the attacks on the two Deganyahs did the Syrian commander there learn that the supplies were being redirected to the north. It was only at this point, according to the Syrian account, that the Syrians decided to pull back to the Golan in the south and shift their attention to the B'nat Ya'acov area. Based on this evidence, I am persuaded that as late as midday on 20 May the Syrians intended to continue to attack south of the Kinneret and only after the failure of the attacks on the two Deganyahs and the arrival of the Israeli artillery did they decide to abandon this axis and instead mount an offensive north of the Sea of Galilee. See Dupuy, p. 49; and Lorch, pp.153-154.

<sup>15</sup> Dupuy, p. 49; Herzog, *The Arab-Israeli Wars*, pp. 53-54; Lorch, pp.153-154; O'Ballance, *The Arab-Israeli War*, p. 111.

<sup>16</sup> Dupuy, p. 49; Lorch, p. 157.

## Syrian Army Operations in 1948



-  - Syrian attacks, May-June 1948
-  - Israeli attacks, July 1948

On 6 June the Syrians were finally ready to go, and that morning their 2nd Infantry Brigade, supported by armor and artillery, attacked across the Jordan river at Mishmar HaYarden. The Israelis had emplaced some automatic weapons along the river and also were able to call in mortar fire which prevented the Syrian infantry from establishing a bridgehead and prevented their armor from even getting across the river. The Syrians pulled back to regroup and the Israelis brought in reinforcements.<sup>17</sup>

On 10 June the Syrians renewed their assault on Mishmar HaYarden, and this time they turned in a very creditable performance. Damascus had reinforced its units here so that it had nearly two brigades in strength. The Syrians began the attack with a determined infantry assault across the river supported by heavy artillery fire from the Golan. In addition, the Syrians brought in aircraft to conduct strikes against the defenders in support of the river crossing. The Syrian guns apparently had gotten the range of the Israeli positions and the infantry was able to establish three bridgeheads on the west bank. The Syrians then crossed an infantry force north of Mishmar HaYarden and an armored unit south of the settlement. These two forces converged on the settlement while Syrian artillery on the east bank continued to pound the Israeli fortifications. This combined attack succeeded in taking the settlement by about noon, although mopping up operations continued for the rest of the day.<sup>18</sup>

The Syrians had hoped to continue pushing westward into Galilee from Mishmar HaYarden to link up with Lebanese forces to sever the Huleh valley from the rest of Galilee. After securing the settlement, they immediately attacked westward toward Mahanayim. However, in this attack their careful combined arms cooperation fell apart. Moreover, they conducted a frontal assault rather than trying to outflank the Israelis, and so were easily defeated. This rebuff ended the Syrian offensive into Galilee. Their forces retreated to Mishmar HaYarden and dug-in.<sup>19</sup>

In July 1948 the Israelis mounted an operation to try to retake Mishmar HaYarden. They concentrated 2,000 men from the Carmeli and Oded Brigades in the hills surrounding the settlement. The Syrians had built up their forces in Mishmar HaYarden to about 2,500 men behind formidable defenses. The Israeli plan was to launch a diversionary attack against the southern flank of the Syrian positions while the main force crossed the Jordan in strength north of the Syrian bridgehead and drove south along the east bank of the river to cut the Syrians off from the rear. The offensive began during the night of 9 July. The Israeli diversionary attack was highly successful and the Syrians were unable to prevent them from capturing most of the critical Syrian strongpoints defending the southwestern perimeter of the Mishmar HaYarden bridgehead. However, the Haganah's main effort failed miserably. The Syrians had observation posts watching the river and realized that the Israelis were trying to ford it to their north. Syrian artillery then fired pre-planned and pre-registered barrages at the Israeli fording operations. These attacks badly disrupted the Israeli operations so that they were only able to cross a small part of their attack force over to the east bank.<sup>20</sup>

The next morning, the Syrians launched a series of skillful counterattacks. They sent their armored reserves against each of the Israeli penetrations in turn. Supported by heavy, and quite accurate artillery fire, the Syrian armor succeeded in blunting each Israeli attack and then driving them back from the positions they had taken during the night. Meanwhile, most of the Syrian Air Force was committed to battlefield air interdiction (BAI) missions which prevented the Israelis from shifting forces and so

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<sup>17</sup> Dupuy, p. 50; Herzog, *The Arab-Israeli Wars*, p. 55; Lorch, pp.162-163; Moreaux, July 1986, p. 37.

<sup>18</sup> Dupuy, p. 50; Herzog, *The Arab-Israeli Wars*, p. 55; Lorch, p.163; Moreaux, July 1986, p. 37; O'Ballance, *The Arab-Israeli War*, p. 113.

<sup>19</sup> Herzog, *The Arab-Israeli Wars*, p. 55; Lorch, pp.163-165; Moreaux, July 1986, p. 37.

<sup>20</sup> Dupuy, p. 83-84; Herzog, *The Arab-Israeli Wars*, pp. 76-77; Lorch, pp. 265-267; O'Ballance, *The Arab-Israeli War*, pp. 152-153.

allowed the Syrian armor to defeat each Israeli column in detail. The last Syrian counterattack was directed against the Israeli forces straddling the Jordan to the north of the Mishmar HaYarden bridgehead, and was intended to eliminate this threat and then drive on north to clear the west bank of the river. The Syrian armor overwhelmed the Israelis at the river and forced them to liquidate their bridgehead on the east bank, but then the Israelis were able to bring up reinforcements and halt the Syrian attack. For the next four days, there was ferocious combat all along the perimeter of the Syrian bridgehead as the Israelis struggled to drive them back across the Jordan and the Syrians fought to maintain their positions. Ultimately, the Syrian advantages in armor, artillery and air power allowed them to successfully fend off virtually all of the Israeli attacks, and by 15 July the lines had essentially returned to their positions at the start of the Israeli campaign.<sup>21</sup>

### **General Observations on Syrian Military Effectiveness During the War of Israeli Independence**

The Syrians did not do too badly in the fighting in 1948. In fact, in a number of areas the Syrians turned in a creditable performance. Syrian forces were extremely brave, repeatedly attacking or counterattacking to take key positions, and fighting relentlessly to hold their defensive lines. Unit cohesion also was quite good, as there were very few instances of Syrian units disintegrating under even very intense pressure. The Syrians fought well on the defensive, particularly at Mishmar HaYarden, where their operations were very skillful using any criteria of measurement. In particular, in that battle, Syrian reserves reacted promptly and attacked hard with good artillery support. Syrian air support at Mishmar HaYarden also was quite impressive, although the absence of any Israeli aircraft made their missions considerably easier.

Combined arms cooperation was an interesting problem for the Syrians. Syrian officers seemed to appreciate the need for combined arms operations at all levels: in every Syrian attack there was at least some effort to have the different combat arms support one another. Even in their worst performances the Syrians tried to use armor supported by artillery. However, the success of these operations ranged widely from the excellent coordination displayed on 10 June in the second (successful) attack on Mishmar HaYarden to the awful performance turned at Deganyah Alef. To some extent, the critical variable appears to have been whether the Syrians had time to really prepare their forces for an operation. When they had three or four days to prepare a set-piece attack, the combined arms coordination generally came off well, whereas on those occasions when they were committed to an operation after only a day or two to regroup and were forced to plan "on the fly," combined arms coordination never came off.

This pattern suggests that only Syrian senior field commanders really understood how to make combined arms operations work. The evidence here is circumstantial, but it appears that only in those operations where Syrian command staffs could carefully lay out the details of an operation and walk their subordinates through each step of the mission did combined arms work. On those occasions when Syrian commanders could only order their troops into battle and improvise the operation as they went, Syrian junior officers seemed to know that they were supposed to try to coordinate with the other combat arms but just couldn't figure out how to do so. Thus in hastily planned operations, the Syrians tried to employ combined arms but it never worked quite right: the armor would leave the infantry behind or would attack on a totally different axis.

As with combined arms operations, maneuver was another characteristic that appeared to come and go based on the extent to which senior Syrian officers could plan an operation and conduct it in set-piece fashion. For the most part, when the Syrians had several days to think through an operation they came up with an outflanking maneuver

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<sup>21</sup> Dupuy, p. 84; Herzog, *The Arab-Israeli Wars*, p. 77; Lorch, pp. 267-269; O'Ballance, *The Arab-Israeli War*, pp. 153-155.



that frequently brought them victory. However, when forced to commit to an attack without adequate preparation time, they generally put in a frontal assault which only succeeded when their firepower advantage over the Israelis was huge. For example, in the two assaults on Zemach the Syrians relied on flanking maneuvers, and in the second attack--which appears to have been the more carefully planned of the two, the first having been more of a probing attack--they succeeded in taking the town. By contrast, in the attack on the two Deganyahs, for which the Syrians had less than a day to regroup and prepare, they conducted a very clumsy frontal assault that failed despite a huge disparity in numbers and firepower. Moreover, at a tactical level, there was little use of maneuver at all, as Syrian infantry and armor simply charged their objectives but rarely if ever tried to secure a position by jockeying for a more advantageous position.

Overall, Syrian accomplishments were very modest. They aborted their offensive south of the Sea of Galilee as soon as they experienced a setback, even though they still had a huge advantage in men and heavy weapons in this sector. In the north, they won a small but impressive victory at Mishmar HaYarden only to give up on that offensive too when their half-baked exploitation effort ran into resistance. Thereafter, they were content to simply sit on the defensive and launch nothing but minor attacks on small, exposed Israeli settlements, none of which had any impact. It is hard to tell, however, whether this desultory pattern reflects a half-hearted commitment to the war on the part of the Damascus political leadership, or an inability of Syria's high command to formulate an appropriate strategic approach to the conflict

### **The Six-Day War, 1967**

The Syrians performed far worse in their next major conflict. Many of the strengths they had manifested against Israel in 1948 seemed to have evaporated without a trace, while all of the weaknesses they had displayed seemed to have multiplied in the 19 year interregnum. The Syrian military was heavily politicized by 1967, suffering particularly from the effects of praetorianism and commissarism. Palace-guardism lingered on, but at reduced levels as the Syrian armed forces began to concentrate more on fighting Israel than had been the case before 1948. The Syrian economy had begun to make some progress, but Syrian society still remained underdeveloped. Finally, the Syrians had begun to pick up significant elements of Soviet military art as a result of deepening ties between the two countries and the absence of a viable alternative.

#### **Politicization**

Between 1948 and 1967 Syria was wracked by internal turmoil. A seemingly endless series of military coups destroyed the stability of the government and what little professionalism the Syrian officer corps had inherited from the French. This constant involvement in domestic politics distracted the armed forces from addressing the serious military shortcomings that had been revealed in the 1948 fighting. In addition, it succeeded in thoroughly politicizing and regularly decimating the Syrian officer corps. In short, when Syria blundered into war in 1967 it was only after nearly two decades of military neglect and abuse.

Praetorianism arrived in Damascus in March 1949 when the Chief of Staff of the Syrian Armed Forces, General Husni az-Za'im, overthrew the fragile civilian government and installed himself as president. Thereafter, military dictatorships became the norm in Syria and a succession of officers passed through the Presidential office. Most of these dictators reigned for less than two years and only a rare few were able to stay in power for as much as four or five years. The army became little more than a ladder to presidential power as military officers quickly shed their professional interests and turned their attention to the pursuit of political power. Indeed, by the 1950s most young officers

were joining the army expressly as a means of gaining political power.<sup>22</sup>

This pattern of constant coups and military dictatorships splintered the armed forces along ethnic lines. The first three Syrian dictators--all of whom took power between March and December 1949--were of Kurdish descent, reflecting the dominance of the minorities over the French-dominated army pre-1947. Between 1947 and 1952, however, large numbers of the Sunni urban middle class and the better-off peasantry began joining the military. At first they joined out of nationalist ambitions to help build a Syrian nation, however, by the early 1950s most were joining as a means of acquiring political power. By 1952, 80 percent of new Syrian officer candidates were Sunnis, and by 1958 the majority of Syrian officers were Sunnis.<sup>23</sup> The Druze also became actively involved in politics, vying with the Kurds and Sunnis for control of the government.<sup>24</sup>

In the mid-1950s, political ideologies were also introduced into this melange, further confusing the issue and further distracting Syrian officers from military matters. Initially, ideological divisions cut-across ethnic and religious cleavages, fragmenting the armed forces to an even greater extent. However, over time, as family members, fellow tribesmen and co-religionists aided each other in achieving positions of power both within the respective political parties and within the military and political hierarchies more generally, the party affiliations began to correspond more to ethnic and religious backgrounds as one or another ethnic group gradually came to dominate the party apparatus. The clearest example of this was the Alawis who by the early 1960s dominated the Ba'th party.<sup>25</sup>

None of this was very good for the development of Syrian military capabilities. One important result of this severe praetorianism was the inevitable development of commissarism as well. Each successful or unsuccessful coup was followed by a widespread purge of the officer corps in which the victor would attempt to extirpate all of the loser's supporters from the ranks. Invariably, these purges fell heaviest on the senior officer corps, which was virtually decimated by the end of the 1950s. To a large extent, Syrian officers were too preoccupied with political issues to have time for training, planning, and equipping for war. Although Syria continued to raid and harass Israel--and to retaliate whenever the Israelis provoked them--military operations were low on the list of priorities for most Syrian governments and most members of the Syrian officer corps. Discipline in the army broke down across the board as units and their commanders pledged their allegiance to different groups and parties. Indeed, by the late 1950s, the situation had become so bad that Syrian officers regularly disobeyed the orders of superiors who belonged to different ethnic groups or "in matters where they differ[ed] politically."<sup>26</sup>

In 1958, Syria agreed to a merger with Nasser's Egypt, forming the United Arab Republic. This state was dominated by Egypt and headed by Nasser. The primary motivating force for Damascus was that the constant infighting and plotting had severely fractured the Syrian polity and the Syrian officer corps. The Syrians basically turned to Nasser--the only figure they believed who could unite them and patch up their fissures--to save them from themselves. But within a year, many Syrians had come to detest the

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<sup>22</sup> Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970), pp. 55-57; Derek Hopwood, *Syria, 1945-1986: Politics and Society*, (London: Unwin Hyman, 1988), pp. 35-36; Tabitha Petran, *Syria*, (NY: Praeger, 1972), pp. 96-105; Seale, *The Struggle for Syria*, pp. 37-147.

<sup>23</sup> Drysdale, pp. 59-62.

<sup>24</sup> Be'eri, pp. 55-66; Drydale, pp. 57-60; Seale, *The Struggle for Syria*, pp. 37-147; Weinberger, p. 67; Van Dam, pp. 31-42.

<sup>25</sup> Be'eri, pp. 57-73; Drysdale, pp. 64-66; Seale, *The Struggle for Syria*, esp. pp. 148-153, 158-282; Patrick Seale, *Asad of Syria*, (London: I.B. Tauris and Co. Ltd., 1988), pp. 24-90; Van Dam, pp. 25-27; 31-42.

<sup>26</sup> Be'eri, p. 73. See Be'eri, pp. 72-73; Drysdale, pp. 62-64; Moshe Ma'oz, "The Emergence of Modern Syria," in Moshe Ma'oz and Avner Yaniv eds., *Syria Under Assad*, (NY: St Martin's Press, 1986), pp. 21-25; Seale, *Asad*, pp. 73-79.

arrogant and self-serving behavior of the Egyptians who ruled the UAR for Egypt's sake and to Syria's detriment. In 1961, a group of mostly Sunni Syrian officers seized power and evicted the Egyptians. The new Syrian junta soon fell to fighting amongst themselves, which paved the way for the Alawi-dominated Ba'th to seize power in 1963.<sup>27</sup>

In 1963, the quintumvirate of the Military Committee (essentially a splinter group of the Ba'th) consisting of Salah Jadid, Muhammad 'Umran, 'Abd al-Karim al-Jundi, Ahmad al-Mir, and Hafiz al-Asad, took power. All five were junior officers in the Syrian military, and so they enlisted the help of several senior officers, mostly other Ba'thists and Nasserists. They also were all Alawis or Isma'ilis and so they brought on board the Sunni officer Amin al-Hafiz to serve as a front man. Upon taking power, this coalition immediately purged the clique of officers who had overthrown UAR rule, dismissing 700 mostly senior officers (fully half of whom were replaced by loyal Alawis). With the old regime out of the way, the new rulers quickly fell to scheming against each other. First, the Ba'thists purged the Nasserists, then the minority officers ousted al-Hafiz and the Sunnis. Finally, the Alawis purged their Druze rivals so that by 1967 the Alawis, led by Salah Jadid and Minister of Defense Hafiz al-Asad, had eliminated all rivals for control of the state.<sup>28</sup>

Once in power, the Ba'thist Alawis moved to try to secure their rule by precluding the possibility of a coup by other elements of the military. First, they encouraged military officers to join the Ba'th party. To some extent this was an effort to co-opt officers to their cause, but for the most part it was a means of establishing their control over the military by inserting their loyalists throughout the military. Second, Alawis were encouraged to enlist and installed throughout the military. Alawis were promoted to the command of all key field units, security services, and other sensitive posts. By the mid 1960s, no Syrian brigade had less than 20 percent Alawi personnel (although Alawis made up only about 10 percent of Syria's population) and certain key regime security forces such as the 5th and 70th Armored Brigades were almost entirely Alawi. Third, the Ba'thists began forming several new regime security forces to protect them from a military coup. They established a National Guard, basically a Ba'thist militia of about 5,000 loyal supporters. In addition, in 1964, they created the *Sarayah ad-Difa'*--the Defense Companies--which by the end of the year had been placed under the command of Rif'at al-Asad, Hafiz's brother.<sup>29</sup>

### Sovietization

In addition to the short-lived union with Egypt, 1958 also saw the beginning of Syria's military relationship with the USSR. After Nasser's precedent-setting arms deal with the Soviets in 1955, Damascus joined numerous other Arab states in seeking military assistance from Moscow. Although a deal was struck as early as 1956, the first deliveries of Soviet equipment did not arrive in Syria until 1958. Soon thereafter, Soviet advisers began to arrive in Syria to teach the Syrian armed forces Soviet tactics and doctrine. Although the Soviet advisory group numbered only a few hundreds throughout the early 1960s they played an important role in Syrian military development. To some extent, they were the only officers in Syria who were serious about teaching the Syrian military to fight. The Russians encouraged Syrian officers to focus on training their

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<sup>27</sup> Drysdale, pp. 59-62, 64-66; M. Ma'oz, "The Emergence of Modern Syria," p. 24; Petran, pp. 128-166; Seale, *The Struggle for Syria*, pp. 307-326; Van Dam, pp. 41-42.

<sup>28</sup> Be'eri, pp. 149-165; Drysdale, pp. 64-66; M. Ma'oz, "The Emergence of Modern Syria," p. 25; Petran, pp. 167-168, 177-186; Itamar Rabinovich, "Continuity and Change in the Ba'th Regime in Syria, in Itamar Rabinovich and Haim Shaked eds., *From June to October*, (New Brunswick, Transaction, 1978), p. 220; Seale, *Asad*, pp. 73-84, 101-113; Van Dam, pp. 43-78; Weinberger, p. 66.

<sup>29</sup> Be'eri, pp. 66, 155; M. Ma'oz, "The Emergence of Modern Syria," p. 25; Petran, pp. 171-174; Seale, *Asad*, pp. 84-96; Van Dam, pp. 77-79, 83-94.

troops rather than maneuvering for political position, usually to no avail. In many instances, the Soviets were forced to shoulder the entire training burden themselves because Syrian officers were simply uninterested.

In addition, the preoccupation of the senior levels of the Syrian military with political matters meant that little effort was put into developing a body of tactical or operational doctrine for the Syrian forces. The 1948 fighting made it clear that the organization and practices the Syrians had learned from the French not only were outdated but had not been very well assimilated by Syrian officers and troops. Thus there was a real need for a thorough revision of training practices, unit organization, and tactical doctrine, but there were few officers who had the desire, the authority, or the time in their position to undertake such a task. As a result, the Syrians adopted many Soviet practices almost by default.<sup>30</sup>

### **The Opposing Forces in 1967**

On paper, the Syrians appeared to be in an enviable position against Israel. In 1967, the Syrian army boasted about 70,000 personnel. The Syrians had roughly 550 tanks and assault guns (most T-54/T-55s and Su-100s), 500 APCs (mostly BTRs), nearly 300 artillery pieces, and 136 MiGs (of which, 36 were the new MiG-21s). The Syrians were organized into sixteen brigades: twelve infantry, two armored, and two mechanized. Virtually all of these forces were part of Syria's standing army and so little in the way of mobilization was required to bring the army up to strength, nor were the Syrians burdened with large numbers of half-trained reservists. Damascus deployed twelve of its sixteen brigades to the Golan, including both armored brigades and one mechanized brigade.<sup>31</sup>

The Syrians also had the advantage of extremely formidable natural positions and extensive fortifications. The Golan is a forbidding obstacle to assault, especially from the west, where it climbs sharply from the Huleh valley in an escarpment rising 1,000-2,000 feet to the crest in most places. The Golan slopes down more gently to the east, with its steepest inclines facing the west. With the help of their Soviet advisers, the Syrians had developed a sophisticated series of fortified positions throughout the depth of the Golan. The Syrians generally relied on mutually supporting defensive positions with interlocking fields of fire, reflecting the Soviet linear pattern of defense. (One British officer who later visited the Golan scoffed that the Syrians had not built a single all-around defensive position--in the British manner--and that all of its fields of fire were "limited and interlocking.")<sup>32</sup> The Syrians and Soviets had identified most of the key avenues of advance and had carefully sited multiple defensive positions to block and trap an Israeli attack along any of them.<sup>33</sup>

Against the Syrians dug-in on the Golan, Tel Aviv mustered a much smaller force. For the first few days of the war the Israelis had only a few brigades deployed opposite

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<sup>30</sup> Helena Cobban, "The Nature of the Soviet-Syrian Link under Asad and Under Gorbachev," in Richard T. Antoun and Donald Quataert eds., *Syria: Society, Culture, and Polity*, (Albany, NY: SUNY Press, 1991), p. 111; Dupuy, pp. 225, 237-238, 318-319; Brigadier Syed Ali El-Edroos, *The Hashemite Arab Army, 1908-1979*, (Amman, Jordan: The Publishing Committee, 1980), pp. 338-356; Eric Hammel, *Six Days in June*, (NY: Scribner's, 1992), pp. 387-390; Roger F. Pajak, "The Soviet-Syrian Military Aid Relationship," in Anne Sinai and Allen Pollack, *The Syrian Arab Republic: A Handbook*, (NY: The American Academic Association for Peace in the Middle East, 1976), p. 97; Petran, pp. 121-122; Seale, *Asad*, p. 52.

<sup>31</sup> Dupuy, pp. 318-319; Hammel, pp. 388-389; Herzog, *The Arab-Israeli Wars*, p. 186; Moreaux, July 1986, p. 38; Seale, *Asad*, p. 117.

<sup>32</sup> Brigadier Peter Young, *The Israeli Campaign, 1967*, (London: William Kimber, 1967), p. 54.

<sup>33</sup> El Edroos, pp. 356, 367; Israel Ministry of Defense, *The Six-Day War*, (Israel: Israel Press, 1967), (hereafter referred to as Israel MoD), pp. 120-121; Nadav Safran, *From War to War*, (NY: Pegasus, 1969), p. 372.

the Golan because everything that could be spared was needed to fight Egypt and Jordan. However, by 9 June the contests in Sinai and the West Bank had been decided and Tel Aviv was able to shift forces to the north to take on the Syrians. Eventually, the Israelis attacked with seven brigades--two armored, one mechanized infantry, two paratrooper, and two infantry--grouped into two *ugdot*.<sup>34</sup> Four of these brigades had been heavily involved in combat in Sinai or the West Bank and were rushed north with little rest or refit. In all, the Israelis probably amounted to no more than about 20,000 troops and 250 tanks. However, one advantage Tel Aviv possessed was that by the time of their attack on the Golan, the Israeli Air Force (IAF) was free to participate fully against the Syrians, all of its other missions having been completed. Despite its busy week, the IAF could still muster over 150 serviceable combat aircraft.<sup>35</sup>

Of course the odds were not as lopsided against the Israelis as these simple comparisons would suggest. In fact, the Syrian military was in terrible shape. As a result of the constant purges, the Syrian combat formations were generally under-officered, and the officers who remained frequently knew little about military operations and cared less. For example, rain causes heavy topsoil erosion and mud run-off on the Golan so that minefields need to be resown every year. The Israelis carefully maintained their minefields, resowing every year after the rains had come, but the Syrians did not bother, with the result that in some places Syrian minefields had been completely washed away.<sup>36</sup> The Syrian military also suffered from debilitating repair and maintenance practices. Preventive maintenance was so infrequent, and so haphazard that fully half of Syria's tanks were inoperable because of maintenance and repair problems. At no point were the Syrians able to achieve an operational readiness rate for any of its mechanized or motorized units of better than two-thirds of its vehicles operable.<sup>37</sup>

The Syrian command and control system was a disaster. The purges had depleted the senior officer ranks and led to such frequent turnover in operational billets that in some cases, Syrian officers were unsure as to whom they were supposed to report. In addition, the thorough politicization of the armed forces blurred exactly who was in charge of any given operation: in many cases, nominal commanders were not as powerful or important as their deputies or subordinates. Syrian forces on the Golan were organized into three brigade groups which were not like normal divisional formations--or even Israeli *ugdot*--but simply administrative entities concerned primarily with supply and personnel matters. They had no actual command authority, and so could not coordinate the actions of their subordinate brigades in combat. Moreover, the Syrians failed to provide an adequate communications structure to allow communication among brigades; instead, all messages had to be relayed through the brigade group headquarters.<sup>38</sup>

Finally, the intelligence balance was weighted heavily against the Syrians. The Israel Defense Forces (IDF) had spent years meticulously cataloguing developments on the Golan heights and in the Syrian armed forces more generally. Israeli cryptologists had broken many of the Syrian military codes and were regularly deciphering many of Syria's deepest secrets. In addition, the Israelis had an extensive human intelligence (HUMINT) operation in Syria. The most famous, and probably the most important, of these Israeli spies was Eli Cohen who managed to insinuate himself into the highest

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<sup>34</sup> An *ugdah*, plural *ugdot*, is an Israeli divisional task force consisting of one or more brigades with supporting forces as needed. *Ugdot* generally have no set pattern of organization but are formed as needed to perform specific combat missions.

<sup>35</sup> Dupuy, p. 319; Hammel, pp. 394-395.

<sup>36</sup> In other places, this negligence actually worked to the Syrians' advantage as the mines accumulated in such density that they formed virtual shoals which Israeli sappers could not clear and had to simply mark these areas as impassable. Hammel, pp. 398-399.

<sup>37</sup> Hammel, p. 390; Edgar O'Ballance, *The Third Arab Israeli War*, (Hamden, CT: Archon Books, 1972), p. 238; Seale, *Asad*, p. 117; Young, p. 54.

<sup>38</sup> Dupuy, p. 318; Hammel, p. 389.

circles of the Syrian government and provided Tel Aviv with complete descriptions--in one case even photographs--of all Syrian fortifications on the Golan, technical specifications of all Syrian Air Force planes, and an encyclopedic breakdown of Syrian Air Force plans, training, and tactical doctrine. On the other hand, Syrian intelligence knew almost nothing about the Israelis. They had only the most rudimentary knowledge of Israeli order of battle and never attempted to understand Israeli plans and doctrine.<sup>39</sup>

### Course of Operations

In the morning of 5 June 1967, the Syrians learned from their Egyptian allies that three-quarters of the Israeli Air Force had been destroyed and the Egyptian Air Force was pounding Israeli air bases. Of course, nothing could have been farther from the truth, but the Syrians bought the Egyptian lies and dispatched a handful of their own aircraft to join the battle. The Syrian planes arrived over Israel while the IAF was finishing off the Egyptians. There was no particular purpose or strategy to their attacks. In the words of a former IAF officer, "they sent a duo here and a trio there in a disorganized fashion, somewhat hysterically and with no real preparation."<sup>40</sup> The Syrian pilots had little idea what was a military target and what wasn't, but seemed to concentrate their attacks in the area of the Haifa oil refinery and Megiddo airfield (which was not in use, suggesting the Syrians mistook it for the nearby Ramat David airbase). They did no damage to any military targets, but these attacks prompted the IAF to retaliate by striking the Syrian airbases at Damascus, Marj Ruhayyil, Dumayr, Sayqal, and T-4. The Syrian aircraft were lined up neatly on the tarmac of each airfield, making them easy prey for the Israelis, who destroyed about half the Syrian Air Force including all but four of the MiG-21s. The Syrians also lost four MiG-17s in air-to-air combat with the Israelis, while the IAF lost only one Mystere in the air raids.<sup>41</sup>

For several days thereafter, things were not quiet but were not really active either between Israel and Syria. The Syrians opened up an artillery barrage on Israeli settlements in the Huleh valley, and the Israelis responded in kind. The two sides traded artillery rounds for the next four days. Meanwhile, on 6 June, the Syrians staged their only ground offensive of the war. They sent a battalion of infantry with about a dozen old T-34s supported by the artillery positioned along the escarpment to attack the Israeli settlements of Kibbutz Dan, Dafna and Shaar Yishuv in the exposed "finger" of Galilee. The Syrian assault was a half-hearted frontal assault in which the officers mostly pointed their men in the direction of the Israeli defenses and ordered them to charge rather than actually leading their troops into battle. The Syrian attack was clumsy and slow and was stopped by the Israelis settlers themselves. Shortly thereafter a flight of IAF fighter-bombers arrived and mauled the Syrians, sending them reeling back to their fortifications on the Golan. All told the Syrians lost six tanks and 200 dead for no gain.<sup>42</sup>

### Israel Attacks

The Israeli offensive, when it came, was a very difficult operation. The Israelis sent the stronger of their two ugdot, that under Brig. General Dan Laner, into the northern flank of the Syrian defensive lines. The terrain was exceptionally difficult here, and as a result, the Syrians had deployed fewer forces and there were fewer fortifications in this area. The Israeli plan was to break through the forward Syrian defenses in this sector and then turn south, rolling up the rest of the Syrian fortifications from the flank. In the

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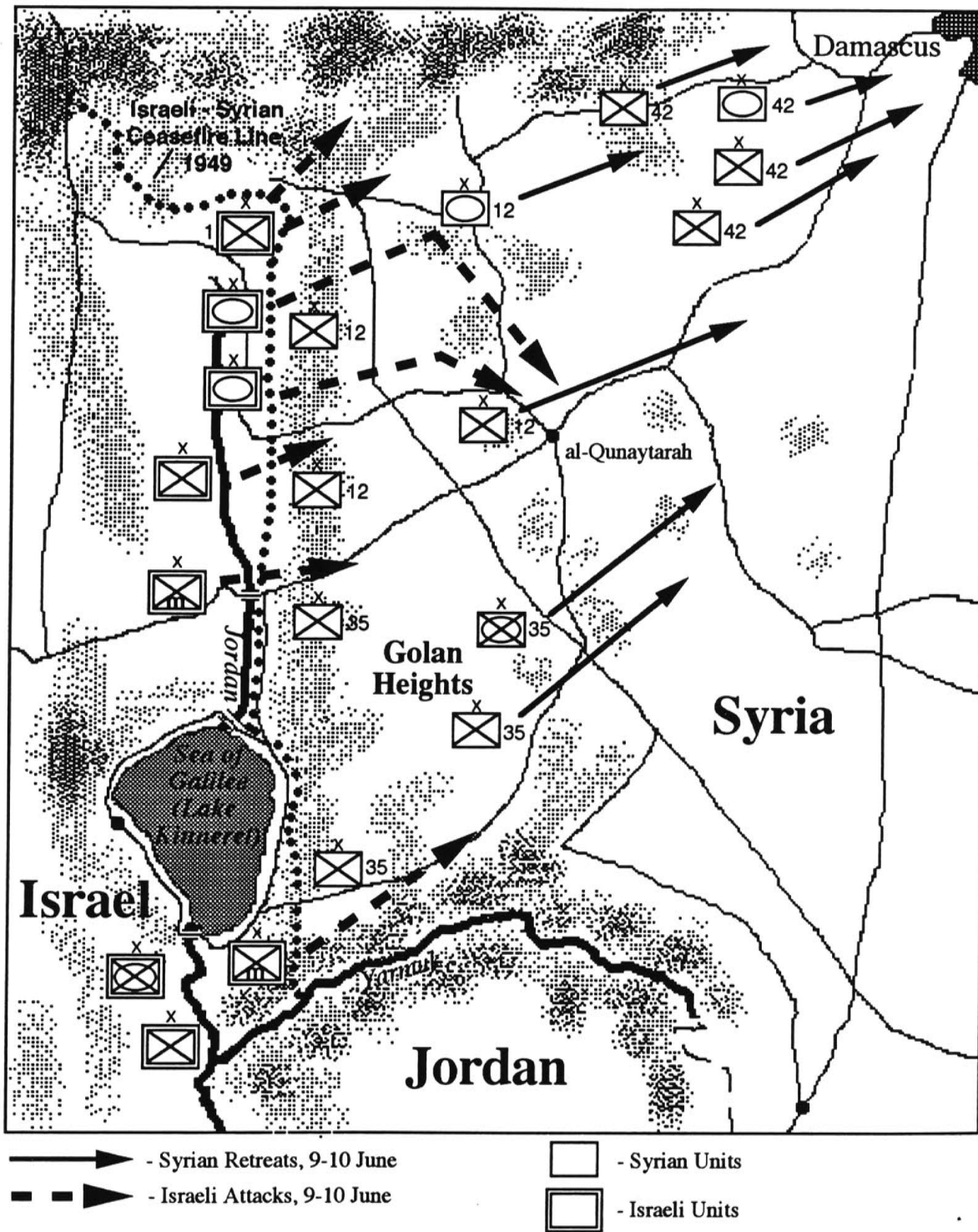
<sup>39</sup> Samuel M. Katz, *Soldier Spies: Israeli Military Intelligence*, (Novato, CA: Presidio, 1992), pp. 161-170, 174, 179-198; Seale, *Asad*, pp. 114-117.

<sup>40</sup> Colonel Eliezer Cohen, *Israel's Best Defense*, Translated by Jonathan Cordis, (NY: Orion Books, 1993), p. 220.

<sup>41</sup> Cohen, pp. 220-221; Dupuy, p. 247; Hammel, p. 392.

<sup>42</sup> Dupuy, pp. 319-321; Hammel, pp. 392-393; Herzog, *The Arab-Israeli Wars*, pp. 185-186.

# The Israeli Conquest of the Golan, June 1967





north, the Israelis would actually launch a main effort and four supporting attacks to try to confuse the Syrians as to where the main attack was and thereby prevent them from counterattacking it with their mobile reserves--the four brigades of the 42nd Brigade Group deployed in the al-Qunaytarah area. Finally, the smaller *ugdah* would demonstrate south of the Sea of Galilee to prevent the Syrians from drawing off forces from the easier terrain in the southern Golan.<sup>43</sup>

The Israeli offensive began on the morning of 9 June 1967 with a tremendous air assault. With all of their other foes defeated, the IAF directed its full might against the Syrians while their engineers tried to clear paths through the Syrian minefields. Although the airstrikes caused little *physical* damage to the Syrian forces, who were well protected in their emplacements and deep bunkers, it traumatized them, pinned them down, and prevented them from interfering with the work of the sappers. Although in some places they found that Syrian negligence had left few mines to be cleared, the fields were so deep and numerous that the process still took a long time.<sup>44</sup>

At 1000 hours, well after their airstrikes had shifted eastward, the Israeli armor and infantry began climbing the Golan. This was not the most elegant breaching operation ever conducted. The terrain was very difficult and the Israelis lost large numbers of tanks and other vehicles to boulders, ditches, loose gravel, and sliding down the hillsides. In addition, the limited road network in the area channeled Israeli movement, causing traffic jams and confusion whenever lead elements hit Syrian resistance or terrain obstacles. Finally, several Israeli units took wrong turns and got lost in the winding paths of the Golan.<sup>45</sup>

The Syrians failed to take advantage of any of these opportunities. Rather than counterattacking the vulnerable Israeli columns as they stumbled through the forward defenses, the Syrian units simply sat in their positions. The Syrians fought back hard whenever the Israelis came into their fields of fire--indicating that they had recovered from the effects of the earlier aerial bombardment--but they made no effort to hit the Israelis while they were disoriented, constricted, and confused to throw them off the Golan altogether. This pattern held true at every level of the Syrian hierarchy. The brigade and battalion commanders manning the forward defensive positions failed to order counterattacks against the Israelis as they breached the Syrian lines. This greatly eased the burden on the Israelis as all they needed to do was to silence nearby positions and then clear away minefields and earthworks. At a higher level, the armored brigade of the Syrian 35th brigade group--in local reserve behind the front lines--failed to counterattack or even to move forward to support their infantry when the Israelis successfully breached the forward defense lines. Finally, at a higher level still, the Syrian General Staff failed to release the 42nd Brigade Group being held in GHQ reserve around al-Qunaytarah to counterattack or reinforce the forward Syrian brigades when the Israeli penetration in the northern sector began to threaten to unhinge the entire Syrian defensive system on the Golan.<sup>46</sup>

Neither did the Israelis have to contend with Syrian artillery fire during the assault. Syria's artillery batteries insisted on continuing to fire on the Huleh valley settlements even long after the Israelis had begun to breach the Golan defenses and had penetrated deep into the Syrians' operational depth. Syrian frontline commanders pleaded with the Syrian artillery units to stop firing at the Israeli kibbutzim and give them fire

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<sup>43</sup> Dupuy, pp. 321-322; Hammel, pp. 395-397; Herzog, *The Arab-Israeli Wars*, pp. 186-187; Israel MoD, pp. 122-125; O'Ballance, *The Third Arab Israeli War*, pp. 238-243.

<sup>44</sup> Dupuy, p. 322; Hammel, pp. 398-399; Herzog, *The Arab-Israeli Wars*, p. 187; Israel, MoD, pp. 122-126.

<sup>45</sup> Dupuy, pp. 322-323; Hammel, pp. 398-415; Herzog, *The Arab-Israeli Wars*, p. 187; O'Ballance, *The Third Arab Israeli War*, pp. 242-247.

<sup>46</sup> Dupuy, pp. 322-324; Hammel, pp. 398-415; Herzog, *The Arab-Israeli Wars*, pp. 187-188; Israel MoD, pp. 125-139; O'Ballance, *The Third Arab Israeli War*, pp. 242-250; Safran, pp. 378-379; Weinberger, p. 70.



support against the IDF assaults, but the Syrian artillery commanders largely ignored their requests. At one point, members of the Soviet advisory mission deployed with the field units on the Golan intervened to try to get the Syrian artillery fire redirected onto the Israeli combat units, but they too failed. Eventually, late in the day, word apparently came down from the General Staff to shift fire to the Israeli forces on the Golan. By that point, however, the Israelis had pushed so far onto the Golan that the Syrian artillery was unable to adequately target them because the Syrians had neither planned fire missions in this area nor registered their guns against targets so far east. As a result, during the night of 9/10 June, Syrian artillery conducted a fairly heavy bombardment of Israeli-held positions, but their fire was highly inaccurate and was more of an annoyance than a real threat to the Israeli units.<sup>47</sup>

The passivity of the Syrians gave the IDF a crucial grace period which they used to get their operations back on track. Demonstrating the brilliance for improvisation the IDF has always nurtured, Israeli units simply kept moving forward, finding new paths east and unplanned routes to outflank and overpower Syrian defensive positions. With the exception of one platoon of T-34s that tried to work its way around to the flank of an Israeli armored battalion--only to be quickly destroyed for its efforts--the Syrians remained immobile. They fought back fiercely from their bunkers and trenches, and in some cases Syrian gunners showed fair marksmanship, but they uniformly declined to get out of their holes and actively maneuver against the Israelis to try to stop their offensive. By the end of the day, Israeli forces had worked their way along a number of routes to the east, at which point they began pushing southward in a wide flanking maneuver designed to envelop the entire Golan.<sup>48</sup>

By nightfall on the first day of fighting on the Golan, the war between Israel and Syria had been decided and Israel had won. Although there were plenty of Syrian units still manning very formidable defensive positions in the southern and central Golan, the entire northern third of the plateau was in Israeli hands and it was simply a matter of time before they pushed south, rolled up the Syrian lines from their flank or rear, and cut-off the entire Syrian army on the Golan. To guard the regime against a possible Israeli thrust against Damascus, the Syrian high command pulled most of the 42nd Brigade Group back to the capital during the night of 9/10 June, leaving only a small rear-guard to cover their withdrawal.<sup>49</sup>

### *Denouement*

The Israeli offensive resumed early in the morning of 10 June. Israeli armor and infantry task forces of all sizes made their way south and east, seizing crucial road junctions and clearing important defensive positions, mostly from the rear. Throughout the Golan, the Syrians fought back bravely, but because they continued to remain immobile in their trenches it was only a matter of time before each Syrian position was reduced by the Israelis. Because Syrian forces would not counterattack, would not come to the aid of neighboring units, and would not try to outflank or ambush Israeli units as they attacked from the rear, the Syrian positions were doomed regardless of how bravely they fought. In some areas, particularly on the roads running into al-Qunaytarah, the Syrians were able to delay Israeli forces for some time. Movement was heavily restricted by the terrain along some of these routes and the Syrians had dug-in infantry and armor in depth along them, and it took hours for the Israelis to fight their way through. However, the terrain was never so poor that the Israelis could not find some way to send part of their force to outflank a Syrian position and overpower it from the rear. In this way, the

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<sup>47</sup> Hammel, pp. 398-399, 416-417; O'Ballance, *The Third Arab Israeli War*, p. 247.

<sup>48</sup> Dupuy, pp. 322-324; Hammel, pp. 398-415; Herzog, *The Arab-Israeli Wars*, pp. 186-187; Israel MoD, pp. 126-139; O'Ballance, *The Third Arab Israeli War*, pp. 242-250.

<sup>49</sup> Hammel, pp. 415, 423.

Syrians delayed the Israelis but could not stop them, and could not even really bloody them in these battles.<sup>50</sup>

At 0845, Damascus radio announced the fall of al-Qunaytarah to the Israelis.<sup>51</sup> Israeli units were still several kilometers from the city and were mystified by the announcements. Most of the Syrian units on the Golan were not as aware of the situation and took this report to mean they were cut-off and trapped on the Golan. This caused a general collapse of the Syrian army. Some units remained and continued to defend their fortifications because they had not been ordered to do otherwise. These units had to be mopped up by Israeli units in difficult hand-to-hand fights. However, the vast bulk of what was left of the Syrian army simply packed up and ran. In a number of cases, Syrian officers simply jumped into their staff cars and fled, literally abandoning their troops who were forced to make their way out on their own as best they could. Because al-Qunaytarah had not fallen to the Israelis and thus many routes east were still open, some Syrian units in the central and southern sectors were able to escape in relatively good shape, while others abandoned their weapons and fled pell mell. By the end of 10 June the Syrian army had deserted the plateau and the Israelis accepted a UN-brokered ceasefire.<sup>52</sup>

Actual losses in this conflict are hard to assess as neither side has put out a full accounting and many of the numbers are in conflict. The Israelis probably took about 750 casualties and the Syrians claim to have knocked out 160 IDF tanks, which seems very high, but there are no Israeli figures available, suggesting it may be accurate. The best estimates of Syrian personnel losses suggest about 7,500 dead and wounded plus nearly 600 taken prisoner. The Syrians admit to the loss of 130 artillery pieces and 86 tanks. In addition, the Israelis claim to have captured at least 40 Syrian tanks intact which were simply abandoned by their crews.<sup>53</sup>

### **General Observations on Syrian Military Effectiveness in the Six-Day War**

On the face of it, Syria should have beaten the Israelis in June 1967, and beaten them badly. Syrian forces outnumbered the IDF on the ground in every important category of military power by anywhere from 2:1 to 4:1. Syria was on the defensive, positioned in superb terrain with very extensive and formidable fortifications. Syrian forces were fully alerted and waiting for the Israelis, hence the Israelis lacked even the advantage of surprise. Moreover, because the Syrian defenses covered the entire western face of the Golan escarpment, the Israelis had to conduct a frontal attack somewhere to try to penetrate the Syrian lines; that is, the Israelis could not simply outflank the entire Syrian position, as they effectively had done to Egypt only days before.<sup>54</sup> The advantages Israel possessed were its complete control of the air, and the psychological momentum its soldiers possessed from their stunning victories over Egypt and Jordan earlier that same week. However, on the minus side, most of the Israeli forces that took part in the offensive were tired and understrength from having participated in the earlier campaigns in Sinai and the West Bank, while the Syrian units were fresh. Even allowing for the Israeli advantages, there is no question that had the Syrians turned in even a

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<sup>50</sup> Dupuy, pp. 324-326; Hammel, pp. 416-424; Herzog, *The Arab-Israeli Wars*, pp. 186-187; Israel MoD, pp. 126-139; O'Ballance, *The Third Arab Israeli War*, pp. 248-256; Safran, pp. 378-379.

<sup>51</sup> Exactly why Damascus issued this false, and ultimately damaging, report remains a mystery. Most current speculation seems to focus on the possibility that the Syrians were attempting to get a ceasefire imposed, perhaps by misleading either the superpowers or the Israelis into believing the IDF had secured the Golan. See for instance, Hammel, pp. 422-423.

<sup>52</sup> Dupuy, pp. 325-326; Hammel, pp. 418-424; Herzog, *The Arab-Israeli Wars*, p. 188; Hopwood, p. 49; Israel MoD, pp. 138-139; John Keegan, *World Armies*, (London: Macmillan, 1979), p. 687; O'Ballance, *The Third Arab Israeli War*, pp. 250-258.

<sup>53</sup> Dupuy, p. 326; Hammel, p. 424; Seale, *Asad*, p. 140.

<sup>54</sup> See Chapter 6.

mediocre performance in battle they would have prevailed. In short, it required a truly awful combat performance for Syria to have lost the Golan to Israel in less than two days.

Military disasters such as the Syrian collapse on the Golan in June 1967 are rarely the product of a single cause, no matter how powerful. Almost invariably, such defeats are the result of numerous factors, all contributing to an outcome even worse than the sum of its parts. The Syrian defeat during the Six-Day war was no exception. Syrian forces performed extremely poorly at virtually every level. Perhaps the only Syrian personnel who can be excused for the defeat were the actual soldiers, artillerymen, and tankers who fought with great bravery and determination and did everything asked of them, but were betrayed by nearly every rung of their leadership. In addition, one must also give credit to the Israelis for an impressive victory. Given the inherent difficulties of the campaign, they devised a very effective strategy and their forces performed brilliantly in executing it.

Syrian strategy *per se* was not part of the problem. The approach Damascus adopted for the defense of the Golan was obvious and entirely appropriate. The Syrians built extensive fortifications across the entire length and breadth of the Golan, taking advantage of the natural strength of their positions to (in theory) force the Israelis to fight to take the entire plateau. These defenses were manned by infantry units supported by armor and plentiful artillery. Behind the forward infantry were two heavy brigades slated to conduct immediate counterattacks against Israeli assaults and prevent them from penetrating into the operational depth of the plateau. Finally, in the al-Qunaytarah area, the Syrians held the 42nd Brigade group as a theater reserve which could be committed to counterattack the main Israeli thrust when it was identified. All things considered, this plan itself wasn't bad--in fact it was quite good. The problem was its execution.

The critical Syrian failing was the unwillingness of any officer along the chain of command to take the initiative and actually execute the counterattacks that were the key to the Syrian defensive system. At the brigade group and GHQ levels, these failures may be excusable: after all, the brigade group commanders lacked the authority--and probably the know-how--to order these counterattacks. Also, the Syrian brigade commanders had great difficulty communicating with one another and we cannot rule out the possibility that the commanders of the heavy brigades assigned as a reserve to each brigade group did not want to launch a counterattack because their communications problems could have resulted in friendly-fire casualties. Finally, the IAF was concentrating primarily on BAI missions and while the evidence is murky, it may be that the Syrian reserve brigades, particularly the units of the 42nd Brigade Group which Tel Aviv was watching very carefully, simply could not move to the front because of air interdiction.

Whether or not one accepts these excuses for the inaction of the Syrian operational and theater reserves, there is no excuse for the dearth of tactical counterattacks. The commanders of the Syrian infantry brigades deployed along the front lines were in complete command of their units and since the IAF interdiction efforts were concentrated farther back to avoid hitting Israeli ground forces, there was no reason for them to not launch counterattacks to throw the Israelis back off the escarpment before they could secure footholds on the plateau. Although it is unclear whether such counterattacks could have actually won the day for the Syrians--the imbalance in tactical skills between Israeli and Syrian units was so great that the Israelis might well have defeated such counterattacks--they unquestionably would have made the Israeli breaching operation considerably more difficult, and ultimately, *they were the Syrians' only chance*. By failing to counterattack, to shift forces to cover exposed flanks, or to move reserves to help threatened sectors, the Syrians allowed the Israelis to regroup after their difficult breaching operation and then systematically shred the Syrian defenses one position at a time. Only a coordinated, aggressive defense--as originally envisioned in Syrian planning--could have defeated the Israelis.

Another major failing of the Syrian military was the general lack of consideration shown by Syrian officers at all levels for the troops under their command. After the war,

rumors spread quickly throughout Syria and the Middle East, that many of the Alawi, Druze, and Isma'ili officers cared little for their primarily Sunni troops.<sup>55</sup> While there is no evidence to support this specific contention of sectarian problems, there is ample evidence that Syrian officers generally neglected their troops. The sudden departure of many Syrian officers during the morning of 10 June is only the most blatant example of this behavior. The unwillingness of Syrian officers to actually lead their troops in the attack on Kfar Dan on 6 June is another example of this tendency.

Perhaps the most important element of military effectiveness this question touches is unit cohesion. Such blatant disregard for their men ought to have produced extremely poor unit cohesion among Syrian forces defending the Golan, but this is not the case. Overall, one can only say that Syrian unit cohesion was uneven, and the behavior of the Syrian officers appears to have only been one element in this pattern, and not necessarily the decisive element. In some instances, Syrian units disintegrated at first contact with the Israelis. For example, at Burj Babil the Syrian officers fled after the first Israeli shots were fired, prompting their men to do the same. By contrast, the number of Syrian units that fought on in their positions even long after the Israelis had gained the upper hand was at least as great and probably greater than those instances of units breaking at first contact. Indeed, at Tel Aziziyat, the Syrian officers tried to surrender their position to the Israelis, but their men would have none of it: they fired on their officers and then fought the Israelis tooth and nail before they were overwhelmed by tank fire and the customary Israeli flanking attack.<sup>56</sup>

For the most part, the real collapse of Syrian unit cohesion came during the retreat after the false announcement of the fall of al-Qunaytarah. We know that many officers did flee, abandoning their men, and we also know that many Syrian units disintegrated. However, we also know that many Syrian units not only hung together, but remained in place, did not retreat, and had to be reduced by the Israelis in close-assaults. What we do not know is to what extent the officer desertions--or any other factor--were correlated with instances of unit disintegration.

Nevertheless, it is clear that problems with unit cohesion appear to have only been a minor element of Syria's defeat. During the crucial first day of fighting, Syrian unit cohesion was very good: there were only a few instances of Israeli troops prevailing because the Syrians had abandoned a position, and the rule was that the Israelis were forced to clear each and every trench and bunker no matter how badly isolated or otherwise compromised it was. The real breakdowns in unit cohesion only occurred on 10 June, when the battle had already been decided. By the time Damascus mistakenly announced the fall of al-Qunaytarah, the Israelis were hours away from that goal at most. They had turned the flank of the entire Golan defense system and were in the process of rolling up all the Syrian defensive positions from the rear. If Syrian forces had held together they would have delayed the Israelis in securing the Golan, and probably would have inflicted more casualties on the Israelis, but not many more, and they would not have been able to *prevent* the Israelis from conquering the Golan. Indeed, the time they might have bought would not even have been relevant in terms of securing a UN ceasefire that might have deprived the Israelis of part of the Golan: the Syrians already had accepted a UN ceasefire even before the Israeli attack on 9 June, but Tel Aviv was determined to have the Golan and ignored the UN ceasefire until after they had conquered it--completely.

The last major problem that afflicted Syrian forces was their very limited tactical capabilities. At bottom, Syrian units simply could not defeat Israeli units of equal or even lesser size. The Syrians fought with great courage and determination, and between their

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<sup>55</sup> Edgar O'Ballance, *No Victor, No Vanquished: The Yom Kippur War*, (London: Barrie and Jenkins, 1979), p. 5;

<sup>56</sup> Both the incidents at Burj Babil and Tel Aziziyat are recounted in Hammel, pp. 413-414.

fortifications and reasonably good accuracy with their small arms, they inflicted a fair number of casualties on the Israelis. But in nearly every firefight on the Golan, the Israelis won--handily. Most of the small unit engagements pitted Israeli forces against Syrian units of equal or slightly smaller size, but well dug-in. In some cases, the Israelis were able to compensate by calling in airstrikes, or less frequently, artillery support. However, in most instances, the Israelis prevailed simply by outmaneuvering and outshooting their Syrian opponents. Time and again, Israeli units would stumble onto a Syrian defensive position, at which point they would conduct a holding attack against it or else suppress its fire with long-distance fire of their own, while another part of their force would work its way onto an exposed Syrian flank. The flanking force usually could then overpower the Syrian defenders quickly and with a minimum of casualties.<sup>57</sup>

Syria's defeat in the Six-Day war therefore can be attributed to several factors. First, to poor leadership at every level of the Syrian armed forces. In particular, to the pervasive lack of aggressive initiative and improvisation, at least among tactical field commanders, and probably at senior levels of command as well. Second, to the vast gap in capabilities between Israeli and Syrian forces such that in engagements in which the two sides were roughly evenly matched, Israeli forces were able to quickly defeat their Syrian opponents. This too can be traced to failures in leadership because Israeli weaponry was no better (and probably worse) than that of Syria, while man-for-man Israeli and Syrian soldiers were probably about even. The difference was that Israeli junior officers were aggressive, motivated, creative, and led their men into battle, while the Syrian junior officers were passive, apathetic, plodding, and often took the first opportunity to rid themselves of their men. Third, was Israel's complete control of the skies, which in part was the product of a superb performance at every level of the Israeli Air Force, but also was a product of the failure of the Syrian Air Force command to take adequate precautions to prevent the loss of their aircraft after the destruction of the Egyptian Air Force earlier that day. The IAF softened up Syrian defenses for Israeli ground forces, impeded movement and coordination of Syrian efforts across the Golan, and may have contributed to the crucial inactivity of Syria's operational reserves. Finally, one must add the Israeli plan itself, which correctly assessed the area of greatest Syrian weakness and found a way to turn that chink in the Syrian armor into a decisive advantage.

### **The Syrian Invasion of Jordan, 1970**

Syria's army turned in an equally poor performance when they attempted to intervene in the Jordanian civil war three years later. The Syrians demonstrated many of the same problems that had cost them so dearly in 1967. Little had changed in the Syrian armed forces during that period in that politicization, at least in its commissarist variant, remained a pervasive influence. Praetorianism also remained strong, although its influence was beginning to decline. There were two areas of change: palace-guardism and Sovietization. In response to their defeat in 1967, the Syrians had focused their military more heavily on preparing for war with Israel, and for this purpose had deepened their adherence to Soviet military methods.

#### **Syrian Military Developments, 1967-1970**

The defeat of Syria's army and the loss of the Golan had serious repercussions in Damascus. Defense Minister Hafiz al-Asad and the generals of the Syrian General Staff were widely blamed for the defeat. Asad was able to avoid being ousted from the

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<sup>57</sup> Hammel provides an excellent description of several dozen such operations. See Hammel, pp. 398-426.

Defense Ministry, but the situation was touch and go for several weeks. The entire experience of the war and its aftermath had two important effects on Asad. First, he developed an almost pathological obsession with defeating Israel and avenging the defeat of 1967. Second, he learned that he needed a firmer grip on power to avoid another such close call.<sup>58</sup>

He moved to address the second of these lessons first by securing his complete control over the military. Asad had begun his career as an Air Force officer and after the 1963 Ba'thist coup he had slowly gained control of the Air Force and built it into his fief and power base. When he eventually took over the Defense portfolio he had retained his almost total dominance of the Air Force but could only make limited inroads into the rest of the armed forces. Indeed, during the Six-Day war he had felt that a number of senior officers in key command positions owed their loyalty to other members of the Ba'thist hierarchy, or were altogether independent. After 1967, Asad carefully began to remove these officers and to install men loyal to him throughout the command structure.<sup>59</sup>

Control of his power base in the military became increasingly important to Asad because subtle fissures began to open up between him and Salah Jadid, the real power behind the throne. Before 1967, Asad had been Jadid's most loyal supporter, and it was this unquestioned loyalty that had prompted Jadid to elevate Asad to the Defense Ministry. However, after 1967, Asad's priorities and even some of his goals began to diverge from those of Jadid and the President of the Republic, Dr. Nur ad-Din al-Atasi. Specifically, Asad's determination to attack and defeat Israel led him to begin trying to improve Syrian military capabilities. To this end, Asad wanted to try to depoliticize the military by taking it out of domestic politics ("de-praetorianizing" it), focusing its attention on external security missions, and improving training practices, among other things. For Jadid and Atasi, however, the "revolution" took precedence over defeating Israel and they saw the military as a key instrument in effecting the social changes they hoped to accomplish. Jadid opposed Asad's efforts to professionalize the military, arguing that the ideological commitment of the army to the "revolution" was more important than its professional skill. By 1970 it was clear that a showdown was brewing, with Asad securing his control over the officer corps and Jadid tightening his grip on the civilian hierarchy. Before they could settle their differences, events in Jordan intruded.<sup>60</sup>

### **The Course of Operations**

On 17 September 1970, King Hussein of Jordan moved to assert his authority over the Palestine Liberation Organization (PLO) and other Palestinian *Fedayeen* groups in Jordan. He ordered his army to crush the Palestinian guerrillas, ushering in what came to be known as "Black September." The Syrian government decided to intervene on behalf of the Palestinians. The Syrian Ba'thists had never been on particularly good terms with the Hashimite monarchy, and were ardent supporters of the Palestinian guerrilla campaign against Israel.

On 18 September, the Syrians sent a reinforced armored brigade into northern Jordan to aid the Palestinians. It is unclear exactly what Damascus hoped to achieve by this action. The Syrians may have hoped that this intervention would simply compel the Jordanian Army to give up its campaign against the PLO. Alternatively, it may have been designed to create a Palestinian enclave or autonomous region in northern Jordan, or it may have been intended to bring about the fall of the Hashimite monarchy and the establishment of a Palestinian government. Syrian military operations give little indication of Syrian intentions because the Syrian armed forces do not seem to have

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<sup>58</sup> Seale, *Asad*, pp. 142-144.

<sup>59</sup> Drysdale, pp. 68-69; Hopwood, pp. 50-52; Seale, *Asad*, pp. 144-151; Van Dam, pp. 84-85.

<sup>60</sup> Drysdale, pp. 68-69; Hopwood, pp. 50-52; Petran, pp. 243-244; Seale, *Asad*, pp. 146-151; Van Dam, pp. 84-85; Weinberger, p. 76.

had any kind of plan, at least initially. Their objective seems to have been to occupy northern Jordan, thus their armor crossed the border and pushed south, quickly overrunning the northern city of Irbid with the aid of local Palestinian forces. The Syrians encountered several small Jordanian army detachments which they brushed aside with little difficulty.<sup>61</sup>

Nevertheless, the Jordanians refused to call off their campaign against the PLO, nor were there any signs that the King was going to be overthrown. Consequently, on 20 September, Syria escalated its involvement in the conflict dramatically by sending the heavily reinforced 5th Infantry Division into Jordan. Damascus attached two armored brigades to the 5th Infantry Division, bringing its tank strength to 200-300 T-55s and its manpower to over 16,000. In addition, unlike the initial Syrian invasion force, which confined itself to extreme northern Jordan, the 5th Infantry Division drove into Jordan at ar-Ramtha and headed south, straight toward Amman. Syrian intentions have never been divulged, but it appears likely that the Syrians intended to overthrow King Hussein themselves, although it is also possible that they meant only to compel him to call off the Jordanian Army's assault on the PLO.<sup>62</sup>

The Jordanians responded by rushing elements of the 2nd Infantry Division and the elite 40th Armored Brigade east from Irbid to stop the Syrians. The 40th Armored Brigade deployed along a ridgeline on the main ar-Ramtha/Amman road just south of ar-Ramtha while the infantry took up positions on another ridge farther to the southwest. On 21 September, the Syrian forces contacted the Jordanian armor. In a fierce battle that raged all day, the Syrians slowly pushed the Jordanians back from their defensive positions, eventually capturing the vital ar-Ramtha crossroads, which provided a direct link between the 5th Infantry Division and the forces in Irbid.

This was not an elegant tank battle. The Syrians failed to properly scout their route and were not aware of the ridgelines ahead of them, or of the positioning of Jordanian armored units in this terrain. Thus they basically just blundered into the Jordanians, yet the Jordanians still could not win. Neither side displayed high standards of marksmanship, even though the tank battalions of the Jordanian 40th Armored Brigade fielded Centurion tanks with the superb L105 tank gun. Moreover, neither side showed any desire or ability to maneuver for position. The Jordanians were content to try to pick off Syrian tanks from their hull-down positions along the ridge line. For their part, the Syrians tried to simply bull their way through the Jordanian positions, launching repeated frontal assaults against the Jordanian defenses and relying primarily on their superior numbers to prevail. The Syrians never really even tried to bring their advantages in infantry and artillery to bear, but instead relied exclusively on their tanks. By the end of the day, constant pressure from the larger Syrian units had forced the Jordanians to fall back to another ridgeline farther south after losing 19 of their own tanks while destroying only 10 of the Syrian tanks.<sup>63</sup>

The next morning, the Syrians resumed their advance against the new Jordanian positions. Amman pulled out all the stops, committing its small air force in full against the Syrians. The Jordanians reportedly generated about 200-250 ground-attack sorties against the Syrian 5th Infantry Division. The Syrian Air Force, however, did not rise to meet the challenge. Hafiz al-Asad apparently disagreed with the Syrian invasion, or at

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<sup>61</sup> Dupuy, p. 380; Edgar O'Ballance, *Arab Guerrilla Power*, (Hamden, CT: Archon Books, 1973), p. 150; Seale, *Asad*, p. 158.

<sup>62</sup> Arthur R. Day, *East Bank/West Bank*, (NY: Council on Foreign Relations, 1986), p. 77; Dupuy, p. 380; El Edroos, p. 455; James Lunt, *Hussein of Jordan*, (London: McMillan, 1989), p. 139; Donald Neff, *Warriors Against Israel*, (Brattleboro, VT: Amana Books, 1988), p. 40; O'Ballance, *Arab Guerilla Power*, p. 150; Seale, *Asad*, p. 158.

<sup>63</sup> Day, p. 77; El Edroos, p. 455; Lunt, pp. 140-141; Petran, p. 247. King Hussein was in a near panic at this point, and his biographer reports that he did not believe the Jordanians would be able to hold. Lunt, p. 141.

least with the commitment of the 5th Infantry Division and the decision to drive on Amman. Although Atasi and Jadid were able to order the invasion, Asad's firm grip on the Air Force allowed him to veto employment of Syrian planes to support the ground forces.<sup>64</sup> Consequently, Syrian aircraft had not participated in the invasion at all to that point, and when the Jordanians finally committed their air force to the fray, Asad refused to allow the Syrians to do the same.<sup>65</sup>

In the ensuing battle, the Syrian armor was badly mauled by Jordanian airstrikes. Jordanian armor again did little, preferring to remain in their defensive positions and snipe at the Syrians from long range. It fell to the Royal Jordanian Air Force (RJAF) to really engage the Syrians. The amount of physical damage they inflicted on the Syrians was not crippling. The Jordanian pilots probably destroyed about 20-40 Syrian tanks and APCs over the course of the day.<sup>66</sup> However, the psychological impact of the constant aerial attack and the complete absence of their own air force caused Syrian units to break contact and begin retreating late in the afternoon on 22 September. In all the Syrians, lost 62 tanks, 60 APCs--most to mechanical breakdowns and abandonment by their crews--and suffered about 600 casualties in the two days of fighting.<sup>67</sup>

Although there was still debate in Damascus about renewing the attack, Asad made it clear that he would not support any additional moves. Of at least equal importance, the Israelis had ominously begun massing armor along the Syrian and Jordanian borders, and were making noises to the effect that they would consider the overthrow of King Hussein a threat to their security. Damascus decided it would be best not to provoke the Israelis any further. Thereafter, the Syrians mostly withdrew their forces from Jordan, essentially ending their involvement in Black September.<sup>68</sup>

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<sup>64</sup> Patrick Seale claims in his biography of Hafiz al-Asad that Asad did not oppose the invasion, but in fact had ordered it. (Seale, pp. 157-159) All other sources contradict this claim, and I find it unpersuasive. See for example, Drysdale, pp. 68-69; Hopwood, pp. 51-52; M. Ma'oz, "The Emergence of Modern Syria," p. 26; Nyrop, pp. 40-41; Petran, pp. 243-244, 247-248; Rudolph, p. 199; and Van Dam, pp. 84-88.

<sup>65</sup> Day, p. 77; El Edroos, p. 455; Richard A. Gabriel, *Fighting Armies: Antagonists in the Middle East*, (Westport, Ct: Greenwood Press, 1983), p. 43; Lunt, pp. 140-141; O'Ballance, *Arab Guerilla Power*, pp. 152-153; Seale, *Asad*, pp. 158-159.

<sup>66</sup> No figures are available on Syrian armor losses to airstrikes vice ground fire. My estimate that the Syrians lost 20-40 tanks and APCs to the Jordanian airstrikes is based on the following calculations. The Syrians lost about 120 armored vehicles altogether on 21 and 22 September. If Syrian experience in 1967 and 1973 is any guide, the Syrians probably lost at least half of these to mechanical breakdowns and abandonment by panicky crews. [For a concurring assessment by US intelligence, see Henry Kissinger, *White House Years*, (Boston: Little, Brown, 1979), p. 628.] The Syrians lost ten tanks on 21 September to Jordanian tank fire. Although it is unclear as to how many, if any, APCs the Syrians lost on 21 September, it is reasonable to assume that they probably lost about 10 as well. Given that Jordanian armor does not seem to have performed any better on 22 September than it had the day before (and if anything, appears to have mostly hung back and allowed the RJAF to do all the hard work) it seems unlikely that they inflicted any more damage to the Syrians on 22 September than they had on the day before. In other words, at most the Jordanian ground forces may have killed another 20 tanks and APCs. Consequently, the most damage Jordanian ground forces probably inflicted on the Syrians on 21 and 22 September was about 40 tanks and APCs killed. Indeed, my sense is that they probably did not even do this many, and the true number may have been closer to 20. Subtracting this figure of 20-40 lost to ground fire--and the 60 lost to breakdowns and abandonment--from the total Syrian losses leaves 20-40 that likely were killed by air power.

<sup>67</sup> Day, p. 77; El Edroos, p. 455; Gabriel, p. 43; Kissinger, p. 628; Lunt, pp. 140-141; O'Ballance, *Arab Guerilla Power*, pp. 152-153; Seale, *Asad*, pp. 158-159.

<sup>68</sup> Dupuy, p. 381; Marvin and Bernard Kalb, *Kissinger*, (NY: Dell, 1975), pp. 197-207; Seale, *Asad*, pp. 158-159.



### The October War, 1973

The October War saw real improvements in some areas of Syrian military effectiveness, and stagnation or even decline in others. Syria went all out for the war, doing everything it could to defeat Israel. Asad made driving Israel from the Golan heights the number one priority of the Syrian military, reducing palace-guardism to the lowest level it had ever been in modern Syrian history. Damascus scrupulously ensured that it would have strategic surprise and a massive quantitative advantage over the Israelis. The Syrians planned their offensive in great detail and rehearsed it constantly. They also received enormous support from the Soviets in terms of equipment and training and adopted Soviet methods to a far greater extent than ever before. The Syrians assiduously recruited the best-educated and technically-trained elements of Syrian society. Asad even went so far as to loosen up on the commissarist reins a bit. Nevertheless, despite all of these changes and all of its advantages, Syria was unable to defeat the Israelis, largely because, at a tactical level, Syrian formations were not in the same league as their Israeli opponents.

#### **Asad Takes Over**

In November 1970, in the wake of the humiliation in Jordan, Hafiz al-Asad ousted Salah Jadid and made himself undisputed ruler of Syria. Having previously secured his control over key military units, Asad's *putsch* required little force. Asad promptly purged the military, the security services, and many important civilian bureaucracies of Jadid's supporters. Many senior officers were dismissed, while others were simply transferred to less sensitive posts. The junior officer corps was not seriously affected by this purge, except to the extent that it provided them with room for advancement.<sup>69</sup>

Although Jadid himself was an Alawi, Asad's takeover really marked the culmination of Alawi dominance of the Syrian government and military. Jadid had still relied on Sunnis in various posts throughout the government. As time went on, Asad slowly invested all power in Alawi loyalists, eventually reducing the Sunnis in his regime to figureheads. While Asad kept numerous Sunnis in important positions, most had little or no power. Only Asad's longtime Sunni friend Mustafah Tlas, whom Asad made Defense Minister when he assumed the presidency, continued to have real influence with the dictator. Elsewhere, power was vested in Alawi deputies wherever a Sunni was given a high-ranking position for the sake of appearances.<sup>70</sup>

When the dust of the coup and purges had cleared, Asad turned his attention to his number one priority: war with Israel. Asad was obsessed with the notion of avenging Syria's defeat--his defeat--in 1967. As Asad came to see it, this effort required him to not simply rearm and expand the Syrian armed forces but also to turn them into a force completely committed to the external security mission, something they had never been in the past. This realization forced Asad to make two important compromises. First, he would have to set aside his well-developed sense of paranoia and turn the military into a more professional (and thus less politically reliable) force. Second, he would have to strike a deal with the Soviets, whom he never trusted, for weapons, training, and expertise.

#### **Depoliticization**

The professionalism of the armed forces, and by association the priority of war with Israel, had been a major cause of Asad's falling out with Jadid. After his successful coup, Asad began to act on his conviction that the military needed to be more

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<sup>69</sup> Dupuy, p. 381; Seale, *Asad*, p. 171.

<sup>70</sup> Drysdale, pp. 69-70; Hopwood, pp. 52, 96; M. Ma'oz, "The Emergence of Modern Syria," p. 28; Petran, pp. 248-249; Seale, *Asad*, pp. 164-177; Van Dam, pp. 89-92; Weinberger, p. 70.

professional so as to be able to defeat Israel and avenge the disaster of 1967. First, the Syrian military was redirected toward the external security mission. Internal security was left to the intelligence and security services, the police, the National Guard, and the various regime protection units--such as Rif'at's Defense Companies. Second, Asad began systematically purging the officer corps of incompetents and political hacks. This culminated in a large-scale dismissal of senior officers in 1972 as Syria approached the start of the October war. In these purges, Asad concentrated on trying to remove those considered unfit for command, as well as those who still viewed their military career as a path to political power. Finally, Asad began to encourage the promotion of merit over loyalty throughout the officer corps.<sup>71</sup>

Asad's version of depoliticization, however, was far from comprehensive. It fell far short of the real structural changes accomplished by either the Egyptian depoliticization between 1967 and 1973 or the Iraqi depoliticization between 1982 and 1986. Promotions based on merit rather than loyalty became more common among junior officers, but at senior levels, Asad scrupulously chose only those officers whose commitment to him were unquestioned--although in a number of cases he found officers who were both loyal *and* fairly competent. While the military was ordered to concentrate on preparing for conventional combat with Israel, and its training became more rigorous and frequent, its internal security responsibilities were always a close second. Asad continued to constantly rotate officers among the senior command billets after only brief tours of duty to prevent them from developing a loyal base of support in any particular unit or command. One lesson the Syrians learned from the 1967 war was that they had to have division commands--the brigade groups were simply inadequate. However, Asad would only allow the creation of five division headquarters because he feared that the division commander positions were too powerful and could easily serve as the springboard for a coup. Consequently, many Syrian units remained independent brigades under GHQ control or temporarily attached to one or another division for a specific mission.<sup>72</sup>

Asad's preoccupation with the security of his regime and his anxiety over the loyalty of his army continued to warp military operations even during the October war. For example, Asad's continued concern for the protection of his regime against internal threats caused him to veto the Syrian General Staff's plan to insert commando teams by helicopter into Israeli rear areas to seize key terrain ahead of the attacking armored columns. The commando units had a high proportion of Alawis and were considered very loyal, so Asad did not want them to take part in risky operations that might result in their destruction or otherwise prevent them from coming to his rescue if his regime were threatened with a coup. Similarly, Asad refused to release the brigades of the Republican Guard to participate in the initial assault against the Israelis on the Golan heights. The Republican Guard brigades, the 70th and 81st Armored Brigades, were manned mostly by Alawis with strong ties to Asad and his regime. They also were among the best armed and trained units in the Syrian army, and the General Staff had hoped to be able to employ them in the offensive against Israel. Asad insisted on keeping them under his personal control and told his generals not to count on being able to employ them in the coming war.<sup>73</sup>

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<sup>71</sup> Jerry Asher with Eric Hammel, *Duel for the Golan*, (NY: William Morris and Co., 1987), p. 52; Drysdale, pp. 69-70; Gabriel ed., p. 42; The Insight Team of the London Sunday Times, *The Yom Kippur War*, (NY: Doubleday, 1974), [hereafter referred to as "Insight Team"], p. 200; O'Ballance, *No Victor, No Vanquished*, p. 35; Seale, *Asad*, p. 205.

<sup>72</sup> Asher, p. 53; Anthony H. Cordesman, *After the Storm: The Changing Military Balance in the Middle East*, (Boulder, Colo: Westview, 1993), pp. 256-278; Drysdale, pp. 69-70; O'Ballance, *No Victor, No Vanquished*, p. 35.

<sup>73</sup> Asher, pp. 54, 63-65.

## Sovietization

Hafiz al-Asad was never more than a cautious ally of the Soviets. Before 1967 he had favored limiting Syrian contact with the USSR to prevent Moscow from meddling in Syrian internal affairs or limiting Syrian foreign policy options. He recognized the need for the advanced weaponry which, for geopolitical reasons, only the Russians could provide Syria, but he relentlessly campaigned to minimize Soviet influence in Syrian internal politics. Jadid and Atasi were never as suspicious of the relationship with the USSR, and once they were gone from the scene, a chill set in between Moscow and Damascus. However, his burning desire to defeat Israel prompted Asad to strike a deal with the USSR. Syria needed Russia's most advanced weaponry and lots of it to be able to retake the Golan. In addition, because for the last 25 years the Syrian military had neglected its training and doctrine, the Syrians also needed Soviet expertise to teach them how to fight the Israelis. So Asad struck a pragmatic bargain with Moscow: he would agree to serve Soviet diplomatic efforts in the Middle East in return for Soviet weapons and advisers.<sup>74</sup>

The Soviets agreed to the Syrian deal and began a considerable expansion of their presence in Syria, although they moved slowly at first. Damascus particularly griped that the Soviets were slow to ship the weapons they had promised Syria, and that Egypt always seemed to get the latest Soviet equipment long before Syria. In truth, Moscow doubted to what extent Syria could be of real value to it, and so gave Egypt priority in all categories of aid. In addition, the USSR was entering into the period of détente with the United States and did not want an aggressive aid program to Israel's Arab adversaries to derail its improving relationship with Washington. However, after Sadat evicted most of his Soviet advisers in 1972, the Russians quickly turned to Damascus as a more committed partner in the region and Soviet weapons deliveries to Syria picked up considerably. By 1973 there were as many as 3,000 Soviet advisers in Syria, and Soviet personnel were attached to every Syrian combat formation down to battalion and squadron level.<sup>75</sup>

By 1973, the Syrian military had been rebuilt very much in the Soviet image. While not a carbon copy of the Red Army--some French practices lingered on--the Syrian armed forces more than any other Arab military adopted Soviet methods as their own. Syrian forces were reorganized along Soviet lines and the Syrians adopted Soviet doctrine almost completely. In contrast to Egypt, whose reliance on Soviet methods was mostly limited to certain elements of tactical doctrine (and even at this level, it represented only one influence on Egyptian practices), the Syrians also borrowed Soviet operational and strategic approaches. The Syrian military parroted the Soviet dogma that only offensive operations could be decisive at the strategic level. They began to think in terms of echeloned attacks by mechanized and armored forces relying on massed firepower to create a breach in the enemy's lines followed by a rapid exploitation into the enemy's operational depth. Damascus' military planners learned to attack into the adversary's depth with airmobile units, airpower, and fast-moving ground columns to seize crucial chokepoints before they could be blocked by the defender's reserves. At the tactical level, Syrian formations learned to attack in line abreast, in echeloned "waves," overwhelming the defender with superior numbers. Syrian infantry formations were mechanized as quickly as possible and were taught to remain buttoned up in their APCs and to fight Soviet-style from their vehicles in an attack. Syrian artillery practiced

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<sup>74</sup> Robert O. Freedman, "Moscow, Damascus and the Lebanon Crisis," in Ma'oz and Yaniv eds., pp. 226-227; Yaacov Ro'i, "The History of Soviet Intervention in Syria," in Anne Sinai and Allen Pollack, *The Syrian Arab Republic: A Handbook*, (NY: American Academic Association for Peace in the Middle East, 1976), pp. 94-95; Seale, *Asad*, pp. 148, 186-189, 397-398.

<sup>75</sup> Cobban, p. 112; Michael Eisenstadt, *Arming for Peace? Syria's Elusive Quest for "Strategic Parity,"* (Washington, DC: Washington Institute for Near East Policy, 1992), pp. 13-15; El Edroos, p. 414; Pajak, p. 98; Ro'i, pp. 94-95; Rudolph, pp. 199-200; Seale, *Asad*, pp. 185-201.

conducting time-phased bombardments to screen the advance of armor and mechanized infantry, and focused on knocking out targets by rapidly saturating an area with fire rather than relying on precise targeting.<sup>76</sup>

### **The Syrian Plan**

Given this heavy Soviet influence, it should come as no surprise that the Syrian design for its offensive to retake the Golan closely resembled what a Soviet command staff might have drawn up. The Syrians hoped to break through the Israeli defenses on the Golan at two points: in the north-central Golan north of al-Qunaytarah and in the south-central Golan at ar-Rafid. The Syrians carved out two narrow attack sectors in these areas and hoped to mass enough firepower against the Israelis defending these areas to blow holes in the Israeli lines. Once they had penetrated the Israeli defenses, armored reserves would be committed to pass through the breaches and exploit into the Israeli rear. In particular, the exploitation forces were to concentrate on seizing the small number of points of entry into the Golan from Israel, sealing the plateau to prevent a counterattack by reserve units assembling in Galilee and trapping the Israeli forces defending the Golan.<sup>77</sup>

The Syrians also learned the importance of surprise from the Soviets. The Syrian plan required surprise for two reasons. First, the Syrians needed to be able to launch their offensive before Tel Aviv was able to mobilize its reserves. The Syrians intended to rely on overwhelming mass to compensate for Israeli tactical competence and therefore they needed to make sure that the Israelis had as little on the Golan as possible to maximize their force advantages. Second, the Syrians needed to hold the initiative throughout the conflict to be able to dictate the terms of battle to the Israelis. The Syrians were planning a set-piece offensive. In this respect, the Syrian operation differed from standard Soviet operating procedures, which allowed for a higher degree of flexibility, at least at operational levels of command. In contrast, the Syrians had laid out in great detail the course of the entire offensive and intended to stick to that plan fairly rigidly. To be able to accomplish this, the Syrians had to seize the psychological initiative, and conduct operations in such a way that the Israelis were constantly reacting to Syrian moves and so would be limited in their ability to disrupt the Syrian offensive. The Syrians would secure that initial psychological advantage by achieving surprise and would maintain this edge through relentless offensive pressure to keep the Israelis constantly off-balance.<sup>78</sup>

To ensure surprise, the Syrians devised an elaborate deception scheme, similar to the Egyptian effort. The Syrians went to great lengths to disguise the build-up of their forces opposite the Golan heights, camouflaging weaponry and making most preparations in complete secrecy. Syrian units also began practicing the sudden conduct of offensive operations from a standing start, so that they could launch their attack quickly and with

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<sup>76</sup> El Edroos, p. 414; Gabriel ed., p. 688; Moreaux, July 1986, p. 40; O'Ballance, *No Victor, No Vanquished*, pp. 285, 336; Pajak, p. Seale, *Asad*, p. 192; Wakebridge, p. 28.

<sup>77</sup> Asher, pp. 55-58; Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), p. 44; El Edroos, pp. 493-495. Some sources have suggested that the Syrians intended to drive into northern Israel once they secured control of the Golan. For instance, El Edroos asserts that the Syrians planned to take at least the Galilee towns of Safed, Tiberias, and Nazareth. (El Edroos, p. 507). The paltry information available from the Syrian side argues that this is not the case and that while Asad may have had it in the back of his head that if the opportunity were available he would continue his offensive into Galilee, his immediate objective was simply to retake the Golan. (See for example Seale, *Asad*, pp. 185-201). I have not been able to reconcile or decide between these two versions. However, because the Syrians never got the chance to put into effect any "Phase II" offensive into Israel--and therefore it is not possible to judge the skill of the plan or its implementation--this absence is largely irrelevant to my study. Consequently, for purposes of this study, I have considered only the Syrian planning and operations to take the Golan itself.

<sup>78</sup> Asher, pp. 55-58; El Edroos, p. 490.

little prior preparation that might tip-off the Israelis. Like the Egyptians, the Syrians also began conducting frequent maneuvers and large-scale exercises to desensitize the Israelis to their preparations for war. In addition, the Syrians conducted a very careful reconnaissance and intelligence-gathering campaign to maximize their advantages over the Israelis and to ensure that the Israelis did not surprise them. When they finally attacked, the Syrians had collected detailed information regarding Israel's order of battle, the layout of its Golan fortifications, the road network, and Israeli command and control on the plateau.<sup>79</sup>

Nevertheless, although the Syrian plan reflected a considerable Soviet influence, it was not the product of Soviet planning. The Soviets were regularly frustrated by Syrian efforts to prevent them from directly influencing operations. In 1972, the Soviet Ambassador to Damascus fumed that, "These damned Syrians, they will take anything except advice."<sup>80</sup> This started at the top. While Asad was willing, indeed eager, to have Soviet equipment and to have Russian advisers teach his men the art of war, he expected them only to *provide* the tools--not to actually wield those tools for the Syrians. In particular, Asad was wary of allowing the Soviets too much access to Syrian planning for fear that the Soviets might find it in their interest to betray that information in pursuit of their own agenda. Consequently, the Soviets were completely excluded from the planning of the offensive against Israel and were not even told of its timing until 4 October, two days before the attack came.<sup>81</sup>

Of course, a good plan is meaningless if it cannot be executed properly, and to ensure this, the Syrians drew on the lessons of their own combat experiences. Like the Egyptians, the Syrians became meticulous planners. The Syrian offensive was scripted in great detail, not quite to the same extent as the Egyptian canal-crossing operation, but far more so than was the case for a normal Soviet operation. The Syrians also implemented a program of repetitive training for the offensive. Syrian units were assigned individual tasks for each part of the offensive and then made to practice executing that mission again and again on full-size terrain mock-ups until they had learned it by heart. In particular, Syria planned the initial assault against Israel's Golan defensive lines down to the last detail. Every Syrian unit knew exactly what it was supposed to do as part of the breaching operation and practiced repeatedly to ensure that they could execute their tasks flawlessly when the time came.<sup>82</sup>

### **The Opposing Armies on the Eve of War**

In 1973, the Syrian Army consisted of 150,000 men with 1,650 tanks (of which 450 were T-62s and the rest nearly all T-55s), 1,000 APCs, and 1,250 artillery pieces. The Syrian ground forces deployed opposite the Golan on 6 October 1973 consisted of 60,000 men, nearly 1,400 tanks, 600 artillery pieces, 400 anti-aircraft artillery (AAA) pieces, and about 65 batteries of SA-2, SA-3, and SA-6 Surface-to-Air Missiles (SAMs). The Syrian assault forces were mostly organized around five divisions: three infantry and two armored. The infantry divisions, which normally possessed two infantry brigades and a mechanized brigade, were each reinforced with an independent armored brigade. Consequently, these divisions were much "heavier" than normal, disposing of roughly

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<sup>79</sup> Dupuy, p. 439; El Edroos, p. 490; Chaim Herzog, *The War of Atonement*, (London: Weidenfeld and Nicolson, 1975), pp. 75-76; O'Ballance, *No Victor, No Vanquished*, pp. 128-129; Seale, *Asad*, p. 204.

<sup>80</sup> Insight Team, p. 72.

<sup>81</sup> Dupuy, p. 566; O'Ballance, *No Victor, No Vanquished*, p. 41; Charles Wakebridge, "The Syrian Side of the Hill," *Military Review*, Feb. 1976, p. 30.

<sup>82</sup> Frank Aker, *October 1973: The Arab-Israeli War*, (Hamden, CT: Archon Books, 1985), p. 20; Asher, p. 58; Riad Ashkar, "The Syrian and Egyptian Campaigns," *The Journal of Palestine Studies*, Vol. III, No. 2, 1974, p. 16; Riad Ashkar, "The Middle East Conflict: The Military Dimension, Interviews with Riad Ashkar and Haytham al-Ayyubi," *Journal of Palestine Studies*, Vol. IV, No.4, 1975, p. 6; Herzog, *The War of Atonement*, pp. 74-76; Seale, *Asad*, pp. 204-205.

200 tanks apiece. In addition, Asad grudgingly gave up control of two of Syria's seven commando battalions to the General Staff for use in the offensive.<sup>83</sup>

The Syrian Air Force boasted more than 300 combat aircraft in 1973, including 200 newer-model MiG-21 fighters, as well as 30 Su-20 and MiG-17 fighter-bombers. However, the Syrians intended their Air Force to play only a limited role in the offensive. The Syrians meant to rely on their SAM and AAA defenses to keep the IAF off the backs of their soldiers, while relegating their air force to hit-and-run missions, contra to normal Soviet doctrine. Like the Egyptians the Syrians planned to use their aircraft primarily to conduct quick strikes against low-risk targets which minimized the chances that they would be shot down by ground-based air defenses or IAF fighters. Although this probably had been Damascus' intention all along, it probably was reinforced on 13 September 1973 when a border skirmish led to an air battle in which the Syrians lost 13 MiGs while shooting down only one Israeli Mirage.<sup>84</sup>

In contrast to this feverish Syrian activity, the Israelis were unprepared for war on 6 October. On the Golan, they had three brigades--two armored and one infantry--with perhaps 6,000 men, 170 tanks, and about 60 artillery pieces. During peacetime the Golan was normally manned by the 188th "Barak" Armored Brigade and elements of the 1st "Golani" Infantry Brigade. The Syrian deception efforts had completely fooled the Israelis and they had not even begun to mobilize their reserves by the morning of the offensive. The Israelis had detected the Syrian build-up opposite the Golan in the first days of October, but Israeli Military Intelligence concluded that this was only routine Syrian maneuvers, and any anomalies were probably the result of heightened Syrian precautions after the September air battle. Israel's Chief of Staff, David Elazar, was not so easily convinced, and although he was unable to persuade the Israeli cabinet to order a mobilization, he was able to shift Israel's elite 7th Armored Brigade to the Golan. Israel had fortified the Golan with anti-tank obstacles, concertina wire, trenches, firing positions for infantry and tanks, and seventeen fortified strongpoints. But these strongpoints--like the Bar-Lev line fortifications along the Suez--were platoon-positions that could not stop a Syrian attack unless the entire line was adequately defended. Moreover, although the Golan fortifications were formidable when fully manned, the Israelis had too few forces on hand to adequately defend the entire front on 6 October. Israel's Air Force had more about 400 combat aircraft--including nearly 300 new American F-4 Phantoms and A-4 Skyhawks--that could rapidly swing into action, but the IAF also had to face Egypt along the Suez front and so could not devote all its attention to the Golan.<sup>85</sup>

In terms of weapons quality, the Syrian-Israeli balance was basically a draw. On the Golan, the Israelis generally employed Centurion and Super Sherman tanks while the Syrians used T-62s and T-55s. The Israelis considered the T-62 a better all around tank than the Centurion for its cruising range, road speed, simplicity and 115 mm gun, among other things, but they loved the armor and armament of the Centurion. Especially in the close combat of the Golan, these were important advantages. Syrian artillery pieces, like the superb Soviet 130 mm M-46, were generally superior to Israel's handful of western guns, and Israeli mechanized infantry were still largely using World War II-vintage M-3 half-tracks while the Syrians had Soviet BTR-50s and -60s and even a number of the new BMP-1s. On the other hand, Tel Aviv fielded better electronic warfare equipment and its air force--with cutting edge F-4 Phantoms--far outclassed Syria's older-generation

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<sup>83</sup> Asher, pp. 52-54; Cordesman and Wagner, pp. 24; Dupuy, p. 441; Eisenstadt, pp. 15-16; Herzog, *The Arab-Israeli Wars*, p. 285; Moreaux, July 1986, p. 40; O'Ballance, *No Victor, No Vanquished*, p. 125.

<sup>84</sup> Cordesman and Wagner, pp. 24, 83; Dupuy, p. 441; Eisenstadt, pp. 15-16; O'Ballance, *No Victor, No Vanquished*, p. 285.

<sup>85</sup> Asher, pp. 35-44; Dupuy, pp. 437, 443-444, 606; Herzog, *The War of Atonement*, p. 61; O'Ballance, *No Victor, No Vanquished*, pp. 121-122.

MiGsand Sukhois.<sup>86</sup>

Syrian forces were qualitatively better than they ever had been in the past. Asad had strenuously tried to recruit better educated and technically proficient men into the military and had enjoyed a fair degree of success.<sup>87</sup> As a result of his (admittedly modest) efforts at depoliticization, Syrian officers were more committed to the military profession than ever before, most junior officers had been promoted because of demonstrated ability rather than political ties, and morale was very high. In addition, for the first time in their recent history, the Syrians were not suddenly thrown into a war after years of neglect of military skills and without having given much thought to how to fight a modern war. Instead, the Syrians were going to war at a time and place of their own choosing, with a well thought-out plan, and having spent the preceding years studiously preparing for the upcoming conflict.

### **The Syrian Offensive**

The Syrians began their assault with an airstrike against Israeli targets across the Golan. The Syrians sent over 100 planes to attack command and control facilities, electronic warfare centers, military encampments, garrisons and vehicle parks, and key defensive positions. The Syrians faced only meager resistance: there were no Israeli fighters in the sky, few ground-based air defenses on the Golan, and even fewer Israeli personnel ready to fight back when they were attacked out of the clear blue on the afternoon of 6 October. The Syrians had planned the attacks carefully, their intelligence was excellent, and they attacked what were in fact the crucial military targets on the Golan; but their execution left much to be desired. Because of their limited skills, Syrian pilots had to rely on predetermined routes of approach as well as predetermined release points, and on numerous occasions pilot error resulted in wide misses. In all, the Syrian airstrikes had very little impact on the Israelis.<sup>88</sup> As Jerry Asher wrote in his outstanding account of the battle for the Golan, "Considering the numbers of aircraft and the utter surprise they achieved, the Syrians had little to show for their attack. Damage and casualties on the ground were minimal. Not one tank or artillery piece was disabled."<sup>89</sup>

On the ground as well, the initial Syrian assaults left much to be desired. Despite their detailed planning and constant rehearsals, the attacks immediately went awry. Syrian columns generally led with armor and mechanized infantry formations, leaving their combat engineers toward the rear. Consequently, Syrian combat units reached the Israeli anti-tank ditch before the engineering units that were supposed to bridge these trenches for their armored vehicles. The Syrian columns got hopelessly tangled as their commanders tried to get the bridging equipment to the front. In some cases, Syrian tanks and APCs did not bother to stop despite the fact that no bridges had been laid across the anti-tank trench: they kept right on going and drove straight into the anti-tank trench. One aggressive Syrian division commander ordered his infantry to dismount and fill in the ditch with shovels, rather than wait until his bridging units could come forward. Another problem the Syrians encountered was that when Israeli fire destroyed the lead armored vehicles in a column, Syrian tanks kept driving forward, refusing to stop or move off the roads to bypass the destroyed vehicles, causing huge traffic jams.<sup>90</sup>

These various problems badly hamstrung the initial Syrian assault, taking away much of their punch when they were strongest and the Israelis weakest. Although the

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<sup>86</sup> Cordesman and Wagner, pp. 45-102; Dupuy, p. 598.

<sup>87</sup> Seale, *Asad*, p. 205.

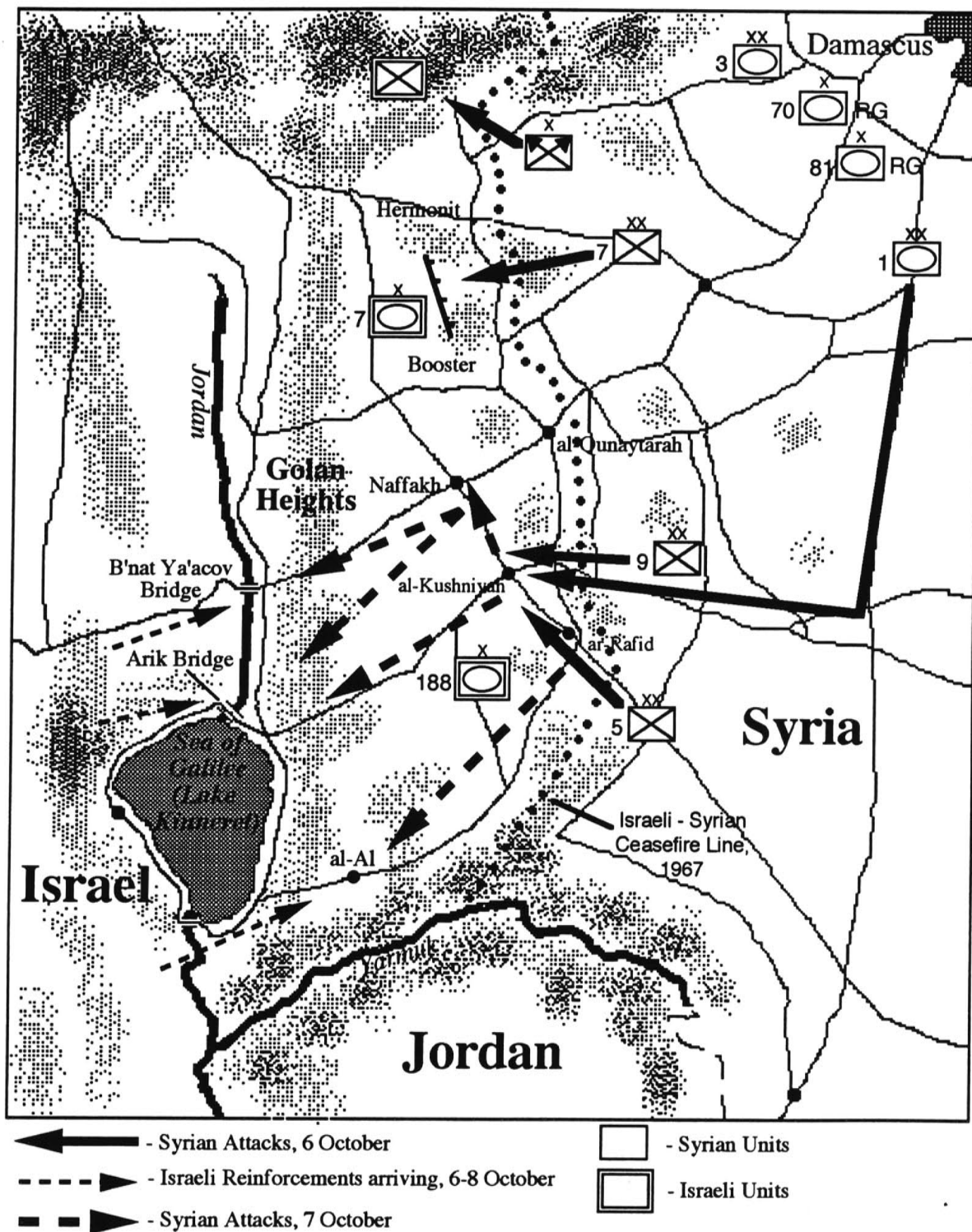
<sup>88</sup> Asher, pp. 83-84; Insight Team, p. 134; Avigdor Kahalani, *The Heights of Courage: A Tank Leader's War on the Golan*, Translated by Louis Williams, (NY: Praeger, 1992), pp. 70-71.

<sup>89</sup> Asher, p. 83.

<sup>90</sup> Asher, p. 91; Cordesman and Wagner, p. 44; Dupuy, p. 445-447; Insight Team, p. 177; O'Ballance, *No Victor, No Vanquished*, pp. 125-127, 134.



# The Syrian Attack on the Golan, October 1973





Israelis had redeployed 7th Armored Brigade to the Golan, they had decided to hold it in reserve west of al-Qunaytarah. Consequently, on 6 October only two battalions of infantry and the 65 tanks of the Barak Brigade were deployed along the 45 kilometer-long border when the three Syrian Infantry Divisions attacked with 30,000-40,000 men and 800-900 tanks. The force ratios were overwhelming in favor of the Syrians, who fell flat on their faces, taking most of the force out of their initial blow. Indeed, the Syrian 7th Infantry Division--the northern prong of the offensive--was able to launch only a disorganized attack with part of its force on 6 October because its units got so hopelessly snarled in traffic jams and the Israeli anti-tank trench.<sup>91</sup>

### *The Southern Assault Sector*

The Syrian effort to break through the Israeli lines in the south-central Golan involved three divisions. The 5th Infantry Division attacked up the TransArabian Pipeline (TAPline) road from around ar-Rafid northwestward into the central Golan. Farther north, the Syrian 9th Infantry Division attacked in a narrow sector around Kudnah, between al-Qunaytarah and the 5th Infantry Division sector. Meanwhile, southwest of Damascus the 1st Armored Division waited to serve as the exploitation force for this breakthrough. The 1st Armored Division was to pass through the gap created by the 5th and 9th Infantry Divisions and drive west to the crucial Arik and B'nat Ya'acov bridges to seal the southern Golan.<sup>92</sup>

The Syrians' quantitative advantages paid off with a successful breakthrough by the end of the first day of the war. The Syrian 9th Infantry Division was slowed by the misplacement of its bridging equipment and by traffic problems, and suffered very heavy losses to Israeli defenders, but eventually it was able to blow open a hole in the thin Israeli lines and drive west to al-Kushniyah, where the division wheeled northwest along the TAPline road toward the main Israeli headquarters at Naffakh. Seeing an opportunity to completely unhinge the Israeli defenses in the central Golan, the 9th Infantry Division commander also sent his 43rd Mechanized Brigade directly north to try to take the Israeli defenses around al-Qunaytarah from the rear. However, this move was not part of the original Syrian operations order and the 43rd Mechanized Brigade acted tentatively and failed to deploy adequate scouts or flank guards with the result that the brigade was repeatedly ambushed and mauled by a company-sized force from the Israeli 7th Armored Brigade. Eventually, the brigade suffered such extensive losses that it had to pull back and abandon this mission. Meanwhile, the 5th Infantry Division got hung up around ar-Rafid by small Israeli armored units that caused disproportionate damage to the Syrians. However, 5th Infantry Division eventually was able to bludgeon its way up the TAPline road to link up with the 9th Infantry Division at al-Kushniyah.<sup>93</sup>

Early in the morning of 7 October, after much debate, the Syrian GHQ decided to commit the 1st Armored Division to the breach created by the 9th Infantry Division. The 9th Infantry was already driving along the TAPline road toward the main IDF headquarters at Naffakh but was being slowed by small Israeli tank and infantry forces that inflicted heavy damage on the Syrians in ambushes and running tank battles. The 5th Infantry Division had turned westward, with one column headed southwest toward al-Al and the bridges across the Jordan south of the Kinneret, and another column headed directly west toward the Arik bridge across the Jordan just north of the Kinneret. The 1st Armored Division arrived on the Golan around midday on 7 October, suffering minor losses to increasingly desperate Israeli air strikes during its move from the Damascus

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<sup>91</sup> Asher, pp. 91-106; Dupuy, pp. 445-448; Herzog, *The Arab-Israeli Wars*, pp. 285-287; Insight Téam, p. 134; O'Ballance, *No Victor, No Vanquished*, pp. 121-128.

<sup>92</sup> Asher, pp. 55-59; Dupuy, pp. 448-450; Herzog, *The Arab-Israeli Wars*, pp. 285-287; O'Ballance, *No Victor, No Vanquished*, pp. 131-134.

<sup>93</sup> Asher, pp. 101-107, 117-130, 153-161; Dupuy, pp. 448-450, 453; Herzog, *The Arab-Israeli Wars*, pp. 285-288; O'Ballance, *No Victor, No Vanquished*, pp. 131-134.

area. The Israelis, for their part, were sending their reservists to the front lines in platoons, squads, or even as individuals as soon as they arrived at their mobilization sites without waiting to try to assemble larger units. When the Syrian 1st Armored Division finally passed through the 9th Infantry Division's lines and set out toward Naffakh and the B'nat Ya'acov bridge, they were met by scattered platoons of Israeli tanks and infantry who nevertheless fought with great determination and skill. Elements of the Syrian 1st Armored and 9th Infantry Divisions were able to force their way up the TAPline road to Naffakh but were stopped there by the Israeli headquarters' personnel together with bits of armor and infantry pulled from elsewhere on the central Golan.<sup>94</sup>

Colonel Tewfiq Jehani, commander of the Syrian 1st Armored Division, recognized that Naffakh was not the critical objective and instead redirected his main force westward toward the Jordan bridges. He sent the T-62-equipped 91st Armored Brigade westward to take the B'nat Ya'acov Bridge and sent his 2nd Mechanized Brigade, together with elements of the 9th Infantry Division, southwest to secure the Arik bridge. Meanwhile, Brigadier General 'Ali Aslan, commander of the 5th Infantry Division sent his 132nd Mechanized Brigade south along the al-Al road to seize the crossings of the Jordan south of the Kinneret and ordered his 47th Armored Brigade westward to aid in the taking of the Arik bridge.<sup>95</sup>

By mid-afternoon all four of these powerful Syrian thrusts had built up a head of steam and had only minor Israeli forces between them and the Jordan bridges, yet all four units stopped before they reached their objectives. In the south, the 132nd Mechanized Brigade ploughed down the road to al-Al where they ran into an Israeli armored battalion of Super Shermans. The Israelis quickly knocked out 17 T-55s for the loss of only 4 Shermans, causing the Syrians to retire for the night early, rather than pushing through the Israelis to the river. This action took place so far south that Jordanian officers (along with Brigadier Syed 'Ali El-Edroos, an observer from the Pakistani Army) were able to watch the battle and were astounded that so large a Syrian armored force would hunker down for the night early rather than push through a much smaller defending force to achieve its crucial objective. Farther to the north, the lead tank battalion of the 47th Armored Brigade charging toward the Arik bridge ran into a reinforced company of Israeli Centurions and, in a brief firefight, lost 35 of its own tanks while destroying only 3 Centurions. This bloody nose prompted the 47th Brigade commander to pull in his horns and go into laager for the night. Also pressing toward the Arik bridge, the Syrian 2nd Mechanized Brigade blundered into a column of IDF reservists heading east to join the fight, completely unaware that the Syrians had penetrated so far west. Although the Syrians quickly dispersed the Israelis with little damage to themselves, for some reason, this skirmish led the Syrian brigade commander to order his men into night laager as well, despite the fact that there was at least an hour of daylight left, the Syrians had superior night-fighting gear, and his brigade had encountered few other Israelis for the last few miles. Finally, the Syrian 91st Armored Brigade made excellent progress along the route to the B'nat Ya'acov bridge, encountering no Israelis until the middle of the afternoon when they overran four Israeli self-propelled guns. Later, around 1700 hours, the brigade vanguard encountered a small group of Golani brigade infantry who put up only "desultory fire" and were easily broken up by the Syrian armor. However, in response to this clash with Israeli infantry the 91st Brigade commander inexplicably ordered his men into night laager too rather than pressing on. At that point, the 91st Armored Brigade--with virtually its entire complement of 95 T-62s intact--was only 3 miles (a 10 minute drive) from the B'nat Ya'acov bridge, which was defended by nothing

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<sup>94</sup> Asher, pp. 162-174; Dupuy, pp. 453-456; Herzog, *The Arab-Israeli Wars*, pp. 287-288; Herzog, *The War of Atonement*, pp. 81-83; O'Ballance, *No Victor, No Vanquished*, pp. 135-137.

<sup>95</sup> Asher, pp. 170-171, 180-183; Dupuy, pp. 456-457; Herzog, *The Arab-Israeli Wars*, pp. 288-289; O'Ballance, *No Victor, No Vanquished*, pp. 136-137.

but a handful of Israeli infantry.<sup>96</sup>

This was the highwater mark of the Syrian offensive. The Syrians had penetrated to within a hair's breadth of the key Jordan-river bridges and had stopped. Their failure to take the bridges on 7 October allowed the Israelis to continue pushing reserves onto the Golan, to build-up sufficient strength to prevent the Syrians from penetrating any further, and then to begin pushing them back.

### *The Northern Assault Sector*

While the southern prong of the giant Syrian pincer movement stopped short when it had victory within its grasp, the northern prong never even penetrated the Israeli forward defenses. The Syrians committed two divisions to this assault sector. The 7th Infantry Division was responsible for breaking through the Israeli lines north of al-Qunaytarah, at which point, the 3rd Armored Division was to pass through its lines and exploit into the northern and central Golan and sweep south, meeting the 1st Armored Division forces around the B'nat Ya'acov bridge and completing the encirclement of Israeli forces on the plateau. However, the 7th Infantry Division got so badly jammed up by poor traffic management, the misplacement of its bridging units in the rear of its columns, and very accurate Israeli long-range tank fire, that it could launch only a badly disjointed and partial attack on 6 October. This was unfortunate for the Syrians because the Israelis had only an understrength armored battalion from the Barak Brigade strung out north of al-Qunaytarah in addition to part of a battalion of Golani infantry manning the strongpoints there. The preliminary Syrian artillery barrage blanketed the Israeli positions but did little damage, and during the night of 6/7 October, as the Syrians struggled across the anti-tank trench, the Israelis moved up the elite 7th Armored Brigade to hold this sector.<sup>97</sup>

On the morning of 7 October, the Syrians were able to mass the 7th Infantry Division for a full assault on the Israeli defensive lines. The Israelis were deployed primarily on two volcanic hills--tels--called by the Israelis Hermonit and Booster, and a ridgeline that ran from north to south between these two hills and came to be called "Red Ridge." The Syrians charged straight at the Israelis in full divisional strength and were stopped cold and forced to retreat with heavy losses. For the next three days the Syrians hammered away at the Israeli 7th Armored Brigade and never broke through. The Syrians launched three to four major attacks each day to try to break through and they kept the Israelis under almost constant fire, but their shooting was inaccurate and they regularly took worse than they gave. Each time they attacked, the Syrians added additional forces to the 7th Infantry Division in hopes of finally overpowering the dwindling Israeli defenders. Eventually, the Syrians became so desperate to break through at Red Ridge that they committed both of the Republican Guard Armored brigades to the attack, but these too were beaten back by the handful of Israeli tanks and infantry remaining.<sup>98</sup>

At times they came close to breaking through the IDF lines, but each time the Israelis fought back skillfully and tenaciously and held their ground. For instance, in

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<sup>96</sup> Asher, pp. 178-184; Dupuy, pp. 456-457; El Edroos, p. 495; Herzog, *The Arab-Israeli Wars*, pp. 289-291; Herzog, *The War of Atonement*, p. 104; Insight Team, pp. 159, 177-182; O'Ballance, *No Victor, No Vanquished*, pp. 136-137; Wakebridge, p. 29. O'Ballance claims that the Syrian General Staff purposely ordered all of its forces on the Golan to stop short of the bridges on 7 October. Indeed, O'Ballance states that General Tlas told him so in an interview, although Tlas refused to explain their reasoning. Asher, Dupuy, the London Times Insight Team, and Wakebridge on the other hand--whose accounts of the Syrian side are far better than O'Ballance's--clearly indicate that the halt of the Syrian divisions on 7 October was not ordered by the General Staff. Indeed, according to Wakebridge, Tlas admitted to him that the Syrian General Staff wanted to take the bridges and the halt was contrary to their desires.

<sup>97</sup> Asher, pp. 89-100, 107-108, 140-144; Kahalani, pp. 42-53, 56-59.

<sup>98</sup> Asher, pp. 190-199, 202; Kahalani, pp. 60-123.

their final effort to break through the Israeli lines on 9 October, the Syrians reinforced 7th infantry Division with additional artillery and even the T-62/BMP-1-equipped 70th Armored Brigade of the Republican Guard. The division launched a massive attack against Red Ridge and the Hermonit. Before the attack began the Israeli 7th Armored Brigade was down to about 40 tanks, while the Syrians committed over 200. The Syrians preceded the armored assault with a huge artillery barrage followed by dismounted infantry well-armed with anti-tank weapons, and a vertical envelopment by a battalion of Syrian commandos who were helo-lifted behind the Hermonit position while the armor attacked Hermonit and Red Ridge. The attack failed because the Israelis first counterattacked and drove off the commandos and then counterattacked and stopped the Syrian armor. The Israelis beat the Syrians back with such severe losses that one Syrian brigade had to be pulled off line for three days before it could be reorganized *as a battalion*. So great was the damage the Syrians suffered on 6-9 October in trying to take Red Ridge that the valley between the Booster and Hermonit tells came to be known as the "Valley of Tears." In that valley, the Syrians lost over 500 tanks and APCs, while the Israelis lost 60-80 armored vehicles of their own.<sup>99</sup>

### *Mount Hermon*

As part of the initial assault on the Golan, the Syrians seized the Israeli observation and listening post high on Mt. Hermon, overlooking the entire Golan and much of the Damascus plain. The Israeli position there was manned by a platoon from the Golani Infantry Brigade, and the Syrians helo-lifted in a battalion of commandos for the operation. The Syrians had gathered detailed information on the layout and manning of the entire Israeli position from espionage and visual surveillance. Nevertheless, they initially attempted a frontal assault which the Israelis beat back with heavy casualties. The Syrians regrouped, and in their second assault they approached cautiously in a bounding-overwatch fashion until they could make a quick charge which succeeded in overcoming the Israeli outer defenses. This allowed them to clear the inner defenses, which they secured simply through weight of numbers but only after a fierce hand-to-hand fight. Later that day the Syrians repulsed a clumsy attack by Golani Brigade units to retake the Mt. Hermon position.<sup>100</sup>

### *The Israeli Counterattack*

On the morning of 9 October, the Israelis began to retake the Golan. Initially, they concentrated their efforts in the southern Golan where the Syrians had been able to drive deep into the plateau. They left the northern Golan in the hands of the remnants of the 7th Armored Brigade which continued to hold back the Syrian armored assaults. After the various Syrian columns failed to seize the Jordan river bridges on 7 October, the Syrian 5th Infantry Division began to establish hasty defensive positions. The division commander, General 'Ali Aslan, reasoned that while his forces were far forward, they had not sealed the Golan at the Jordan and it was unlikely that after failing to take the bridges the day before they ever would. He reset his units into a defense-in-depth anchored on the al-Al ridgeline to try to defeat the inevitable Israeli counterattack.<sup>101</sup>

In fact, the Israeli counterattack began in 'Ali Aslan's sector. The Israeli 146th Reserve Armored Division under Brig. General Moshe Peled--an ugdah of three armored brigades and an armored infantry brigade, with only about 110 tanks remaining--attacked up the main al-Al/ar-Rafid road. Meanwhile, another Israeli reserve division, the 210th under Brig. General Dan Laner conducted a supporting attack into the central Golan

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<sup>99</sup> Asher, 225-240; Dupuy, pp. 447, 457-459; Herzog, *The War of Atonement*, p. 113; Kahalani, pp. 93-123; Neff, pp. 163, 194; O'Ballance, *No Victor, No Vanquished*, p. 142.

<sup>100</sup> Asher, pp. 145-149; Dupuy, p. 448; O'Ballance, *No Victor, No Vanquished*, pp. 128-129.

<sup>101</sup> Asher, pp. 205-207.

against the Syrian 1st Armored and 9th Infantry Divisions. Although the rough terrain prevented the Israelis from deploying their entire force on line, the T-55s of 'Ali Aslan's 47th Armored Brigade could not hold back the lead battalion of Israeli Super Shermans and were repeatedly mauled and forced to fall back. Later, the Israelis penetrated into terrain that allowed them to employ a second battalion which swung around and caved in the left flank of the 47th Armored Brigade, causing the entire unit to collapse. Many Syrian tank crews simply abandoned their vehicles and fled on foot. The disintegration of the 47th Armored Brigade completely unhinged the Syrian position and the Israelis quickly exploited this breakthrough by pouring all of the tanks and infantry they could scrounge into the gap.<sup>102</sup>

'Ali Aslan realized that the collapse of his 47th Armored Brigade and the resulting Israeli breakthrough created a dire emergency and he began trying to shift forces to try to close the gap. However, his units took an inordinately long time to get moving, and most proved incapable of quickly reorienting themselves or counterattacking to close the gap. When his own efforts failed, he tried to convince the Syrian General Staff that either they had to send immediate reinforcements to try to close the breach, or else conduct a major withdrawal to prevent the Israelis from encircling and destroying the entire Syrian army on the southern Golan. But the GHQ was unperturbed by his dire warnings. In the end, 'Ali Aslan's reading of the situation was entirely correct: the Israelis poured forces into the breach and then turned on the Syrian units in the central Golan from the rear. Many Syrian units fought extremely hard against the Israeli attacks, but the combination of attacks from their rear and Israel's superior tactical proficiency, led to a total defeat with little damage to the Israelis. By nightfall on 9 October, the Israelis had reached the TAPline road and effectively destroyed the Syrian 5th Infantry Division as a fighting force.<sup>103</sup>

The destruction of the 5th Infantry Division led to the disintegration of the entire Syrian front in the central and southern Golan. Israeli units began to penetrate the entire length of the front, driving into the flanks of nearby Syrian units, while Peled's 146th Division turned the flank of the entire Syrian line and drove north and eastward, smashing Syrian units from behind and cutting their lines of communication back to Damascus. To their credit, the Syrians generally did not crack. Most Syrian formations stuck together and fought back hard even when outflanked and surrounded by Israeli armor. In many places, the Syrians clung to their positions. These units failed to reposition to meet the new threat of the 146th Division on their left flank, but neither did they panic and abandon their sector. The Israelis had to reduce each of these positions one at a time, which they did quickly and with few losses, but only after a sharp fight in every instance. In other cases, Syrian units conducted a fairly effective withdrawal from the Golan, deploying rear guards and covering forces that while invariably destroyed by the pursuing Israelis, nevertheless held up the Israeli armor long enough to let other units get away. Even among the units that retreated, only a few simply fell apart, abandoning their equipment and then fleeing pell mell back to Syria.<sup>104</sup>

By the evening of 10 October, the Israelis had driven the Syrians back to the post-1967 ceasefire line, erasing all of their gains over the previous four days. Moreover, the Israelis had devastated the Syrian army in the process. In the battles on the Golan alone, the Syrians lost 867 of the roughly 1,400 tanks they had committed to the fighting, while knocking out only about 200 Israeli tanks.<sup>105</sup> None of the Syrian units that managed to

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<sup>102</sup> Asher, pp. 210-219; Dupuy, pp. 456-457; Herzog, *The Arab-Israeli Wars*, pp. 289-291; O'Ballance, *No Victor, No Vanquished*, pp. 138-139.

<sup>103</sup> Asher, pp. 219-225; Dupuy, pp. 457, 461; Herzog, *The Arab-Israeli Wars*, p. 291.

<sup>104</sup> Asher, pp. 241-258; Dupuy, p. 461; Herzog, *The Arab-Israeli Wars*, pp. 291-293; Insight Team, pp. 198, 239-242; O'Ballance, *No Victor, No Vanquished*, pp. 139-142.

<sup>105</sup> The vast majority of the Israeli tanks "knocked out" were repaired and returned to combat within a few

make it back from the Golan were in good enough shape to stop, dig-in and halt the pursuing Israelis. Most of the Syrian divisions were demoralized and disorganized by the retreat, and had suffered heavy casualties during the battle for the Golan. While the Israeli forces were exhausted from the grueling contest, their morale was high and they had rebuilt their strength to the point where they could consider an attack into Syria.<sup>106</sup>

### **The Israeli Counteroffensive**

On the morning of 11 October, the Israeli forces launched a major offensive into Syria itself. The Israelis hoped to inflict additional attrition on the already badly beat up Syrian army and then drive to within artillery range of Damascus. Tel Aviv reasoned that the further reduction in Syrian military strength, coupled with the threat to the capital, would neutralize Syria as a threat, allowing the transfer of units to the Sinai front. The Israelis had formed their forces in the north into three ugdot: the 36th Armored Division under Brig. General Rafael Eitan, the 240th Reserve Armored Division under Brig. General Dan Laner, and the 146th Reserve Armored Division under Brig. General Moshe Peled. The Israeli offensive plan called for Eitan and Laner's divisions to drive north toward Damascus with Eitan on the left, attacking the sector north of al-Qunaytarah, and Laner on the right, attacking south of al-Qunaytarah. Meanwhile, Peled's 146th Division would guard Laner's right flank by holding the southern and central Golan all the way to the Jordanian border. All of these units were well below their authorized strengths, but the Syrians had been so badly pummeled on the Golan that the Israelis were certain they could make good headway against them.<sup>107</sup>

After the loss of the Golan in 1967, the Syrians had built three lines of fortifications to defend Damascus against an Israeli offensive. These lines were extremely formidable, having been built with the aid and advice of the Soviets. The first was only a few miles back from the ceasefire line that had been agreed on at the end of the Six-Day war. The second was 5-10 kms farther northeast, centered on the Syrian town of Sa'sa, and the last was on the outskirts of the capital itself. The Syrian forces were so badly disorganized from their defeat on the Golan and subsequent retreat that they were able to offer almost no resistance to the Israelis at their first line of defense. The Syrian units mostly fled in front of the Israelis rather than even trying to stop and defend their ground. As a result, the Israelis pushed through the first line of fortifications without a fight in most areas. Indeed, in the north, the 36th Armored Division reported very little contact with Syrians at all early on 11 October. Elsewhere, scattered Syrian units continued to stand and fight as rearguards but were easily outflanked and destroyed, or simply bypassed, by the Israeli armor.<sup>108</sup> One Israeli officer stated that, "No [Israeli] tank or APC was hit during the 17 kms of the breakthrough, neither in ours nor the Centurion regiment [the other tank battalion in this officer's brigade]."<sup>109</sup>

The Israeli onslaught panicked the Syrian General Staff. The Syrian army was in poor shape, and although its troops generally were retreating stubbornly and in good order, there were few units capable of turning and actually stopping a major Israeli assault. The Syrians apparently were so unnerved that they went to the Soviets for advice. The Syrians previously had barred the Soviets from any of their planning sessions and had mostly kept them in the dark as to what was going on during the fighting

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days. Asher, p. 272.

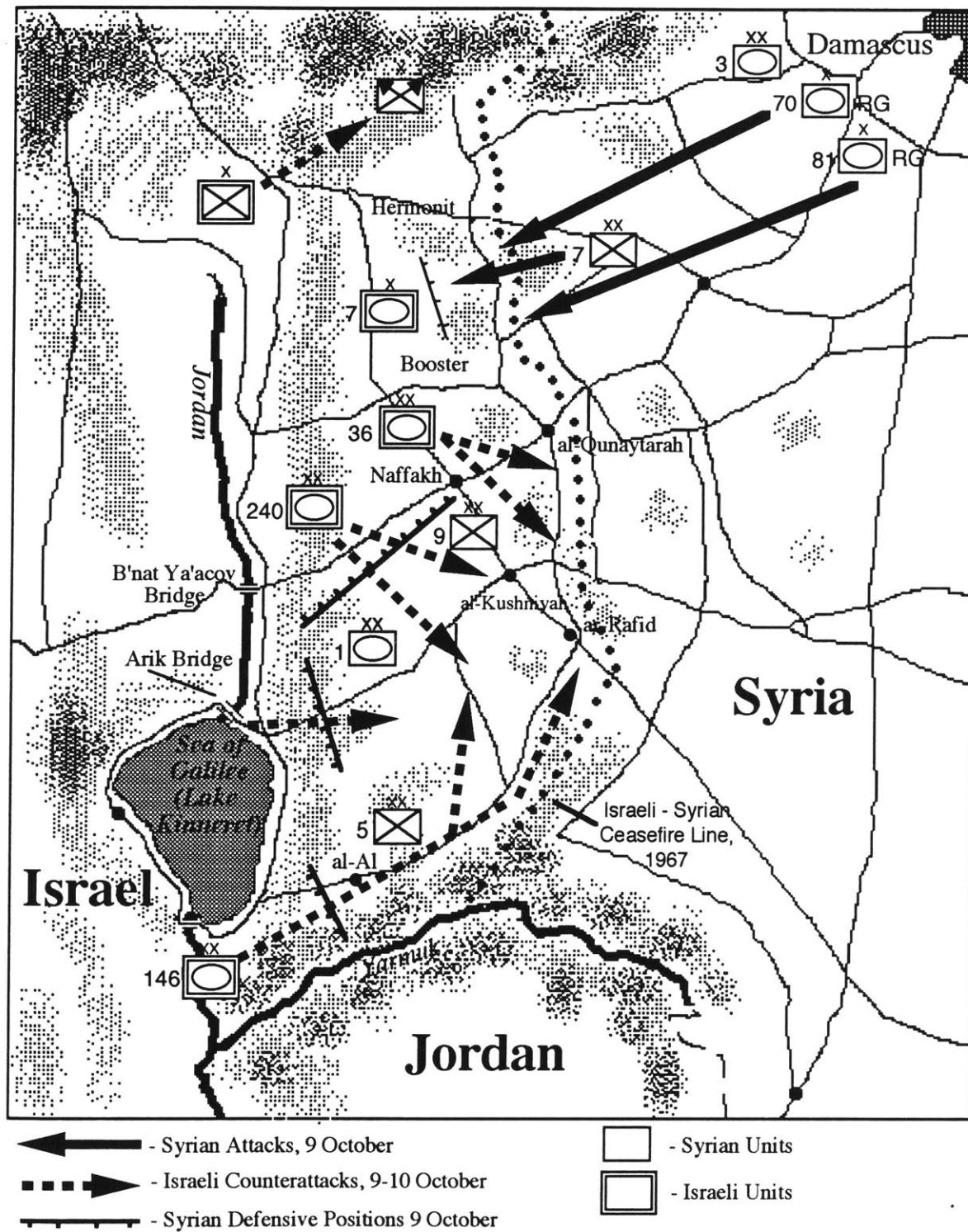
<sup>106</sup> Asher, p. 254; Herzog, *The Arab-Israeli Wars*, pp. 291-293; O'Ballance, *No Victor, No Vanquished*, pp. 142-144; Wakebridge, p. 29.

<sup>107</sup> Asher, pp. 262-264; Dupuy, pp. 462-463; Herzog, *The Arab-Israeli Wars*, p.p. 293-296; O'Ballance, *No Victor, No Vanquished*, pp. 189-192.

<sup>108</sup> Dupuy, pp. 463-465; Herzog, *The Arab-Israeli Wars*, pp. 296-297; Insight Team, pp. 198, 239-242; Kahalani, pp. 135-164; O'Ballance, *No Victor, No Vanquished*, pp. 191-194; Tzvi Ofer ed., *The Iraqi Army in the Yom Kippur War*, translated by "Hatzav," (Tel Aviv: Ma'arachot, 1986), pp. 76, 92-93.

<sup>109</sup> Ofer, p. 93.

# Israel's Counterattack on the Golan, October 1973





for the Golan. On 10 October, the Syrians revealed the entire course of the battle and the current situation to their Soviet advisers and asked for help. The Soviets concluded that the Syrians would not be able to make a stand at the first line of defenses, and instead advised them to make their stand at the Sa'sa line. The one major combat unit left in the Syrian army that was still relatively intact was the 3rd Armored Division. The 3rd Division had never gotten the opportunity to exploit into the northern Golan, and the only combat it had seen was on 10 October when the General Staff had ordered its 15th Mechanized Brigade to counterattack the Israelis on the Golan to try to relieve the pressure on the retreating Syrian units, and possibly break through to relieve several large pockets of trapped Syrian armor. These counterattacks had mostly failed, but the 3rd Armored was still in good shape. On Soviet advice, Damascus ordered 3rd Armored Division and a number of other smaller units that had not been committed to the attack on the Golan, including several commando battalions, to man the Sa'sa line defenses. Syrian units retreating from the Golan were told to fall back on the Sa'sa line.<sup>110</sup>

The Israelis began to hit the Sa'sa line later on 11 October and early on 12 October. The fresh 3rd Armored Division fought hard from these positions and was able to throw back the initial Israeli probes in several places. In particular, Syrian commandos with anti-tank guided missiles (ATGMs) rebuffed several Israeli tank attacks that were conducted without adequate infantry or artillery support. However, the Israelis quickly brought up additional forces, including paratroopers, and began to cut through the Syrian defense lines in key places. The units comprising the right flank of the Israeli 240th Armored Division later broke into the largely open and undefended terrain southeast of Sa'sa and began threatening to turn the left flank of the Sa'sa line and envelop the entire Syrian defensive system.<sup>111</sup>

Just when things began to look very bleak for Damascus, the Syrians were saved from an unexpected quarter. During the afternoon of 12 October, the Iraqi 3rd Armored Division, which had just recently arrived in Syria, blundered into the undefended right flank of the Israeli 240th Armored Division. The Iraqis moved slowly and haltingly, but their mere appearance south of the Israeli axis of advance caused Israeli General Laner to call off his flanking maneuver against the Sa'sa line and redeploy his ugdah to face south, toward the Iraqis. With the 240th Armored Division forced onto the defensive, Tel Aviv reined in General Eitan's offensive and ordered his 36th Armored Division to take up defensive positions as well. For the next 11 days, the fighting on the Golan bogged down into a stalemate. The Syrians used the Iraqis (and the Jordanian 40th Armored Brigade which arrived soon thereafter) to conduct attacks against Laner's ugdah while their own forces licked their wounds and tried to regroup. The Iraqi attacks were inept, but they kept the Israelis occupied on an almost constant basis, preventing the Israelis from doing much damage to the weak Syrian forces holding the Sa'sa line. Thanks to a truly enormous resupply effort by the Soviets, the Syrians had replaced large amounts of equipment lost on the Golan before the end of the war, and they claim to have been preparing to launch a major counterattack against the Israelis to push them back from the Golan. However, if such an attack were truly being contemplated, Damascus apparently had little confidence that it could actually succeed because it accepted the UN brokered ceasefire on 23 October, before they could launch this offensive. On the other hand, by about 14 October, the Israelis--who were within artillery range of southern Damascus--concluded that they had essentially met their objectives, and the appearance of the large,




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<sup>110</sup> Asher, pp. 251-252, 261; Dupuy, p. 467; Herzog, *The Arab-Israeli Wars*, pp. 298-299; O'Ballance, *No Victor, No Vanquished*, p. 143; Wakebridge, p. 30. It was also at this point that Syrian began to pressure Egypt to launch a major attack from their bridgeheads to try to relieve some of the pressure on them.

<sup>111</sup> Cordesman and Wagner, p. 36; J. M. Moreaux, "The Syrian Army," *Defence Update*, No. 79, March 1986, [hereafter referred to as "Moreaux, March 1986"], p. 26; Dupuy, pp. 465-467; Herzog, *The Arab-Israeli Wars*, pp. 297-300; Insight Team, pp. 198, 239-242; Kahalani, pp. 164-176; O'Ballance, *No Victor, No Vanquished*, pp. 192-194; Ofer, pp. 89-93.



[illegible]

 - Syrian Units  
 - Israeli Units  
 - Allied Arab Units

fresh Iraqi and Jordanian forces would preclude further offensive action. They were content to sit on the defensive, and began transferring units to the Sinai front before agreeing to the ceasefire on 23 October. The only other significant military action on the northern front came on 20 October when a combined Israeli force of paratroopers and Golani Brigade infantry retook the Mt. Hermon position against fierce Syrian resistance.<sup>112</sup>

By the end of the war, the Syrians had lost 1,150 tanks, had 3,500 men killed in battle, probably another 10-12,000 wounded, and 370 taken prisoner. On the other hand, Israeli losses in the fighting against the Syrians, Iraqis, and Jordanians amounted to 250 tanks destroyed, 772 dead, 2,453 wounded, and 65 captured (including pilots).<sup>113</sup>

### **The Air War**

Syria's air and air defense forces did not perform well. To some extent, they kept the Israeli Air Force occupied during the first three days of their offensive, but even in this mission they were only partially successful and paid a very high price for their efforts. Ultimately, the Syrians did not do even as well as the Egyptian air and air defense forces on the Sinai front. The Egyptians effectively prevented the IAF from participating in the ground war until Israeli ground forces created a gap in the Egyptian SAM screen, they deterred the Israelis from attacking their SAM network until it had been degraded by the Israeli ground advances, and they also prevented or deterred the Israelis from striking strategic targets elsewhere in Egypt. The Syrians never were able to prevent the IAF from attacking their ground forces to the extent the Egyptians were, they had much of their ground-based air defense system neutralized by Israeli air strikes, and they could not prevent the Israelis from conducting an extensive air campaign against military, political, and economic targets throughout Syria.

From a broad perspective, the air battle on the northern front during the October war was primarily a contest to determine just how long the Syrians could prevent the IAF from gaining air superiority and then exerting its influence on the ground conflict. The Syrians conducted their initial 100-sortie air attack on Israeli targets on the Golan, did little damage, and were unable to generate many more sorties for the next 24 hours. On the first day of the war, the IAF concentrated primarily on the Egyptian front, where they were badly bloodied. Beginning on 7 October, the second day of the war, Tel Aviv redirected its air effort to the Golan. Although a number of IAF aircraft flew close air support (CAS) and battlefield air interdiction (BAI) missions against Syrian ground forces, the lion's share of the Israeli air effort over the next three days went toward destroying the Syrian SAM forces. During the same period, the Syrians flew a fair number of CAS and BAI sorties of their own (sometimes exceeding the Israeli figures in these categories), but with little effect. In addition, Syrian fighters were committed in some numbers to try to oppose the Israeli efforts to neutralize their ground-based air defenses. Still, by 10 October, the Syrian air and air defense forces were in disarray and the Israelis essentially had established air superiority over the Golan. Israeli aircraft increasingly attacked Syrian ground forces as they retreated from the Golan and, in response to Syrian FROG rocket attacks on northern Israel, they began striking targets throughout Syria such as oil storage tanks, power plants, port facilities, airfields and even the Syrian Defense Ministry. After 12 October when the Iraqi intervention forced the Israelis to halt their drive on Damascus--and when the Suez front began to heat up again--the Israelis shifted their air effort back to the southern front.<sup>114</sup>

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<sup>112</sup> Dupuy, pp. 467-469, 531-536; El Edroos, p. 509; Herzog, *The Arab-Israeli Wars*, pp. 299-306; Kahalani, pp. 177-192; O'Ballance, *No Victor, No Vanquished*, pp. 194-219, 217.

<sup>113</sup> Asher, p. 272.

<sup>114</sup> Dupuy, pp. 549-556; Herzog, *The Arab-Israeli Wars*, pp. 309-311; O'Ballance, *No Victor, No Vanquished*, pp. 290-301; Ehud Yonay, *No Margin for Error*, (NY: Pantheon, 1993), pp. 323-351.

**Table 9a. Israeli and Syrian Ground-Attack Sorties on the Northern Front by Day During the October War**

October	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Israeli	26	271	188	168	230	353	158	NA	36	33	30	12	0	2	NA	55	22	42
Syrian	100	20	NA	85	80	0	NA	NA	NA	NA	20	NA	0	2	NA	24	NA	0

NA - Strike sorties flown but number not available

Source: Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), pp. 25-28.

During the first four days of the war the Syrians were able to fly a number of ground attack sorties in support of their offensive. Syria's command system for receiving air support requests from ground commanders and then allocating and executing air strikes in response to these requests proved rigid and overly compartmentalized. As a result, their CAS and BAI missions were rarely timely. Except when air support was requested well ahead of time to coincide with a ground assault, the Syrians rarely managed to time their air attacks for maximum impact. When Syrian aircraft did arrive on the scene only occasionally did they do any damage to the Israelis. For example, when a tank battalion of Laner's ugdah was attacked by 24 Syrian aircraft on 11 October the Syrians did not score one hit on any of the battalion's vehicles, and caused only minor personnel injuries. While the Syrian airstrikes often caused the Israelis to run for cover, since they rarely coincided with a ground assault even this had no meaningful effect on the battle. On at least two occasions late in the war, Syrian aircraft attacked Jordanian and Iraqi forces as they moved to attack the Israelis, although in these cases as well they did little damage. Finally, the Syrians conducted one strategic air raid against Israel, against the Haifa oil refinery. In this strike, the Syrians attacked the wrong facility, completely missed the one they attacked and lost a Su-7 to an Israeli HAWK SAM in the effort.<sup>115</sup>

Syrian fighters fared no better in air-to-air combat with the Israelis. There were 65 major dogfights between the Syrians and Israelis. The Syrians appear to have shot down 6-10 Israeli aircraft while losing about 162 of their own aircraft to Israeli fighters.<sup>116</sup> The Syrians generally tried to avoid dogfights with the Israelis, but this was

<sup>115</sup> Asher, pp. 227-229, 235; Cordesman and Wagner, pp. 28, 97-100; Dupuy, pp. 549-556; Kahalani, esp. pp. 70-71, 107-108; Ofer, p. 93.

<sup>116</sup> Cordesman and Wagner, pp. 85-91; Herzog, *The War of Atonement*, p. 259; Dupuy, p. 554. Numbers of Israeli aircraft shot down in dogfights remains very unclear. Most sources agree that Egypt and Syria combined shot down 6 Israeli aircraft. However, as both Dupuy and Cordesman and Wagner note, probably a few of the 20 or so Israeli aircraft lost to "unknown causes" probably were shot down in air-to-air combat, so the "true" number is probably closer to 10 or 15. There seems to be general agreement among the various sources that there were slightly more air-to-air engagements over Syria than over Egypt, although we have no way of knowing how many planes participated in each of these engagements, or if dogfights over Syria on average involved the same number of planes as participated on average in the air battles over Egypt. Thus relying only on the fact that there were slightly more dogfights fought with the Syrians, that the Syrians and Egyptians were about equal in terms of pilot skills, and assuming that on

difficult in practice. The IAF intercepted Syrian aircraft conducting CAS, BAI, and interdiction missions, provoking dogfights between the Israelis and escorting MiGs. The Syrians also committed their fighters to defend their SAM network when the Israelis really went after it on 7-10 October. In addition, the Israelis conducted fighter sweeps over Syrian territory with the specific intent of provoking Syrian fighters to come up and get shot down--which is mostly what happened. On 8 October, for example, the Israelis were causing such damage to the Syrian SAMs that Damascus committed large numbers of interceptors to try to chase off the Israelis but ended up losing 27 of their own planes for no Israeli losses. Likewise, on 14 October the Syrians lost another 21 aircraft in aerial engagements, and although the Israelis lost four Phantoms, at least two and possibly all were shot down by ground-based air defenses rather than Syrian fighters. Nevertheless, the Israelis remarked that the Syrian pilots, while less skillful even than the Egyptians, were also considerably more aggressive and courageous than most Egyptian pilots.<sup>117</sup>

Syria's air defense forces were the most effective element of its overall air effort, but were far less successful than their Egyptian counterparts. Initially, the Syrians were able to prevent the IAF from having an undue impact on the ground fighting by shooting down, damaging, or chasing away large numbers of Israeli planes. Then, beginning late on 7 October, the Syrian SAMs continued to preoccupy the Israeli Air Force, but as a target set that absorbed most of its sorties as the Israelis made an all-out effort to suppress the Syrian ground-based air defenses during the next two to three days. Syrian SAM and AAA crews were extremely poor and had to fire huge salvoes of missiles to actually kill Israeli planes. By 9 October, the Syrian SAM batteries had nearly run out of missiles as a result of this profligate expenditure, effectively neutralizing much of their ground-based air defense threat. Thus by about the time of the start of the Israeli counteroffensive into Syria, the Syrians had lost their ability to keep the IAF at bay, and thereafter they suffered proportionately greater damage to their ground forces and strategic and economic targets. As a final note, Syrian SAMs shot down at least six, and possibly two or three times that number, of their own aircraft, and at least another four Iraqi aircraft operating from Syrian bases.<sup>118</sup>

### **General Observations On Syrian Military Effectiveness During the October War**

The Syrians fought terribly, yet they still came close to achieving their goals. The Syrian breakthrough in the southern Golan on 6/7 October was unquestionably the most dramatic Arab opportunity of the war to achieve a meaningful military victory. It is unclear whether the Syrians could have held back an Israeli counterattack from the Galilee had they been able to seize the Jordan river bridges and encircle the Israeli forces on the Golan. However, it is beyond doubt that such a counterattack would have been considerably more difficult for the Israelis than the actual counterattack they developed. The forbidding terrain of the Golan's western escarpment and the general absence of a military infrastructure for such an operation in Israel's Huleh valley would have greatly complicated an Israeli counteroffensive to retake the Golan.

The measure of just how poorly the Syrians fought is the tremendous advantages they possessed over the Israelis. In particular, the Syrians had gained the advantage of strategic surprise. The Israelis were completely unprepared for their attack, both psychologically and physically. By itself, strategic surprise has historically proven to be

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average the engagements involved the same numbers of aircraft, I estimate that the Syrians killed slightly more Israeli planes than did the Egyptians.

<sup>117</sup> Colonel Eliezer Cohen, *Israel's Best Defense*, Translated by Jonathan Cordis, (NY: Orion Books, 1993), pp. 361, 390-391; Cordesman and Wagner, pp. 85-90; Insight Team, p. 204; Yonay, pp. 323-351.

<sup>118</sup> Dupuy, pp. 551-553; Brereton Greenhous, "The Israeli Experience," in Benjamin F. Cooling ed., *Studies in the Development of Close Air Support*, (Washington, DC: US Air Force, 1990), p. 515; Herzog, *The Arab-Israeli Wars*, pp. 288-291; Insight Team, p. 315; O'Ballance, *No Victor, No Vanquished*, p. 295; Yonay, pp. 350-351.

a decisive advantage that can only be overcome by tremendous skill on the part of the defender or remarkable ineptitude on the part of the attacker. At the most obvious, physical level, the Syrians secured an overwhelming material advantage over the Israelis by achieving strategic surprise. On 6 October, the Syrians had a 10:1 advantage in infantry, a 12:1 advantage in tanks, and a 20:1 advantage in artillery. There are also a number of other physical manifestations of strategic surprise that invariably hinder the surprised party: units may not be in their ideal location, defenses may not be in the proper shape for combat, formations may be reorganizing, and administrative moves may be taking place that make units or positions far more vulnerable than they would be if they had had even a few days notice of attack. Finally, one should not discount the enormous *psychological* impact of this advantage. Strategic surprise means that the defender has not had the opportunity to steel his troops for battle and thus they are far more likely to panic when the first shots are fired. The defender also has not had the opportunity to check and double check all of the minutiae of war that are the primary source of what Clausewitz called "friction." Given these overwhelming advantages, how did the Syrians lose?

### *Strategic Performance*

Syria's strategic leadership, its divisional commanders and above, performed very unevenly. In some ways, they were quite good and were a principal element of the successes the Syrians enjoyed in the war. In other ways they were miserable, and contributed to the overall defeat of Syrian arms. On balance, however, they did as much good as harm and cannot be considered the decisive element of Syria's military failure.

The Syrian invasion plan was pretty good and credit for this must go to the Syrian General Staff. Damascus recognized its tremendous advantage over the Israelis in standing military forces and the potential of strategic surprise in magnifying that advantage, and it built a plan designed to exploit these advantages. The operational concept itself--punching through the Israeli defenses both north and south of al-Qunaytarah by concentrating overwhelming force against narrow attack sectors and then exploiting to the Jordan to prevent Israel from reinforcing their units on the Golan or counterattacking the Syrian columns--was quite good. The attack sectors the Syrians picked for these two breakthroughs were well-chosen and the forces the Syrians assigned for the campaign should have been adequate. Indeed, the Syrians generally did a very impressive job concentrating their forces to achieve the maximum advantage in force ratios in the crucial breakthrough sectors. The Syrians also did a superb job both in working out the details of the operation, including all support functions, and in gathering information on the Israelis.

Consequently, there are few elements of the Syrian campaign plan that can really be faulted. One obvious exception to that rule is the absence of deep heliborne or airborne operations to seize the key transportation chokepoints of the Golan. For example, if Syrian units could have been airlifted in to take the Jordan bridges on the first day of the war, the Syrians might have been able to prevent the Israelis from sending their reservists to the Golan in dribs and drabs, forcing them to collect enough combat power to actually clear the Syrian units holding the bridges. Since it was this steady trickle of reinforcements that eventually allowed the Israelis to hold, cutting off the flow for a day, or even a few hours, might have been the difference between victory or defeat. However, even in this case, it appears that the Syrian General Staff initially had wanted to conduct such operations but felt they were impossible given the very small number of commandos Asad was willing to release to them for the assault. It is unclear whether there were other infantry formations in Syria other than the commandos that could have undertaken such missions, but the benefit of the doubt probably ought to go to the General Staff given that they had wanted to conduct such attacks.

Beyond the initial invasion plan, the Syrian General Staff did not exactly cover itself in glory. They debated for five hours whether to commit the 1st Armored Division

after the commander of the 9th Infantry Division reported his breakthrough late on 6 October. This may or may not have played a role in Syria's defeat, but given the priority of speed to the Syrian offensive--that is, securing the entire plateau before the Israelis could mobilize their reserves--it was an inexcusable delay. Likewise, after the Israelis had thrown their forces off the Golan on 10 October, the General Staff seems to have panicked and gone running to the Soviets for advice. Finally, Syrian direction of the Iraqi and Jordanian attacks beginning on 12 October was extremely poor. The Syrians could not adequately coordinate the efforts of these forces, or their own supporting artillery and airstrikes, resulting in a great deal of friendly fire casualties and attacks that lost their punch because of poor planning. In general, the Syrian preparations for these attacks was very careless, suggesting they really did not care whether the Iraqis and Jordanians won or lost, but simply wanted them to keep the Israelis occupied.

The worst failing of the General Staff, however, has to be their unwillingness or inability to shift the effort of the 7th Infantry Division to a different attack route after it became clear that the Israeli 7th Armored Brigade was not going to be pushed off Red Ridge. While it is certainly true that Syrian forces should have taken Hermonit, Booster and Red Ridge given their overwhelming advantages in men and weapons, after the first attacks failed, Damascus should have recognized that they were banging their heads against a wall in the Valley of Tears and so were wasting precious time. Consequently it is inexcusable that the Syrian high command did not order its 7th Infantry Division to redirect its efforts either to the north or south. Although the terrain was worse to the north, and to the south was al-Qunaytarah and then the 9th Infantry Division sector, it is not the case that there were no other conceivable axes of advance. At the very least, if the Syrians were going to commit both brigades of the Republican Guard to the offensive, rather than send them to smash their heads against the 7th Armored Brigade wall, they should have been sent south to help exploit the 9th Infantry Division's breakthrough. Instead, the General Staff reinforced failure rather than success, a cardinal sin of armored breakthrough operations.

By contrast, Syria's division commanders performed quite well. The 9th Infantry Division commander, Colonel Hasan Turkmani, did superbly. Not only did he mass his division so tightly that they were able to overcome skillful Israeli resistance and achieve the crucial breakthrough by dint of overwhelming mass, but he also recognized a golden opportunity and took the initiative to redirect one of his brigades north--a move not anticipated by the campaign plan--to try to roll up the Israeli defensive positions in and around al-Qunaytarah. This gambit failed only because his troops could not move and fight effectively without the detailed guidance of the campaign plan and so were defeated by a much smaller Israeli force. General 'Ali Aslan of the 5th Infantry Division did well in establishing a defense-in-depth to try to hold the southern Golan after it became clear that the Syrians would not take the Jordan river bridges. In his case as well, it was the inability of the units under his command to defeat a numerically inferior force that doomed his command. Colonel Jehani of the 1st Armored Division correctly recognized that the bridges, not the Israeli headquarters at Naffakh, were the crucial objective and redirected his best brigades toward them. However, Syria's division commanders were not flawless: all failed to organize their march columns properly and, to some extent, Turkmani, Jehani and 'Ali Aslan must also be held responsible for the failure of their forces to capture those bridges on 7 October.

### *Tactical Performance*

The performance of Syria's tactical forces had little to recommend itself. By and large, Syrian forces performed extremely poorly against the highly skilled Israelis. More than anything else, this massive imbalance between Syrian incompetence and Israeli hyper-competence led inexorably to Syria's defeat. At every turn, the limitations of Syrian tactical performances forced their strategic leadership to work harder to achieve modest successes, while turning their mistakes into catastrophes.

During the initial assaults against the undermanned Israeli defensive lines, Syrian tactical performance was so poor that what should have been a walkover became a fifty-fifty proposition, with one attack succeeding and the other failing despite almost equally overwhelming odds. Syrian units made little or no use of tactical maneuver to secure advantages over the Israelis. Syrian forces insisted on conducting their attacks as frontal assaults, and in defense they either remained in their prepared positions and blasted away at the Israelis or else counterattacked into the teeth of the Israeli assault forces. This tendency proved particularly detrimental during the fighting on the Golan as Israeli tanks constantly darted around the flanks of Syrian columns, destroying armored vehicles and blocking their routes of advance. Because Syrian armor simply surged forward mindlessly, they often created severe traffic jams and "target-rich environments" from which they could not fight back effectively.

The best example of these problems was the series of Syrian attacks on the Israeli 7th Armored Brigade. Not only was it the case that at an operational level, the Syrians would not find an alternative axis of advance, but at the tactical level, Syrian tanks and APCs simply rolled forward, only to be destroyed by Israeli long-range gunnery and flanking maneuvers. In those cases where Syrian tanks did get through the Israeli lines through sheer numbers, it was the exception when they turned to hit nearby Israeli forces in the flanks and thereby increase the size of the breach. Instead, they generally just kept driving forward until an Israeli unit could chase them down and destroy them.<sup>119</sup>

At first, Syrian artillery provided reasonably good covering fire for the advancing Syrian armor and infantry. This was because the Syrians had planned and calibrated these bombardments for six years. However, once these attacks were over--and especially where Syrian units had broken through the Israeli lines and the battle became very fluid--the accuracy and timeliness of Syrian artillery support dropped precipitously. During the fighting on the Damascus plain, Syrian artillery landed so far off the mark that on several occasions it struck Jordanian and Iraqi formations. The Syrians demonstrated a fairly good ability to use direction-finding equipment to pinpoint certain Israeli commanders, but their artillery consistently failed to hit the targets located by their direction-finding teams. Syrian artillery also generally did poorly in counterbattery duels with Israeli guns, relying on mass fire rather than precision fire and rarely taking out the Israeli batteries (although they were occasionally able to force Israeli batteries to move by getting close with their rounds).<sup>120</sup>

These problems with artillery were one element of the virtual absence of combined arms operations, especially after the first series of attacks. After the initial assaults, Syrian forces rarely employed combat engineers or other specialized support units to aid them in the performance of their mission. Once they were through the Israeli fortification belt, the Syrians relied almost entirely on their combat arms to execute operations. Syrian infantry support to their armor was almost nonexistent. The Syrians consistently led their attacks with tanks and if they even bothered to include mechanized infantry formations in the operation, they generally kept their infantry mounted in all circumstances. There were a few exceptions, most notably the final Syrian assault against Red Ridge on 9 October, but even on these occasions the infantry attacked, like their tanks, walking slowly in line-abreast at the Israelis who mowed them down with the machine-guns on their armored vehicles. Syrian infantry generally did not even try to take cover or otherwise use the terrain when they attacked dismounted, but instead simply marched forward looking more like British troops at the Somme rather than a modern army. In particular, the Syrians made no effort to use ATGM-equipped infantry to infiltrate forward of the armor and get in among the Israelis to cause havoc before the

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<sup>119</sup> On the tactical battles around the Valley of Tears, the best account is unquestionably Kahalani's *The Heights of Courage*, Op. cit.

<sup>120</sup> Asher, p. 119; Herzog, *The War of Atonement*, p. 83; Ofer, p. 227.



main attack arrived. Many of the Israeli units on the Golan were pure tank formations and their greatest fear was of Syrian infantry getting in among their positions and hitting them from behind with anti-tank weapons.<sup>121</sup> The lack of infantry support for their armor also hurt the Syrians when they were defending against Israeli counterthrusts after 9 October. In some places the Syrians set up massive anti-tank positions manned largely by ATGM-equipped infantry that gave the Israelis real fits. However, in most areas, the Syrians had only tanks which would not get out and maneuver against the Israelis. Without the threat of Syrian infantry to concern them, Israeli tankers could do what they did best and maneuver from position to position, taking flank and rear shots until the Syrian tanks were destroyed or retreated.<sup>122</sup>

As this makes clear, the Syrians relied too heavily on their armor formations, which while plentiful, were not skillful. In tank duels with the Israelis, Syrian tank gunners mostly proved to be poor shots. Syrian tankers remained tied to the road network, generally refusing to move off the roads to engage or outflank the Israelis and making it easy for the Israelis to ambush and outmaneuver them. It was this tactical incompetence that allowed tiny Israeli formations to not only hold off, but actually defeat, far larger Syrian formations. For example, even after three days of almost constant Syrian attacks, the seven remaining tanks of the Israeli 77th Tank Battalion of the 7th Armored Brigade, threw back the fresh, T-62-equipped 70th Armored Brigade with heavy losses at Red Ridge. Earlier, on 6 October, a force of 8 Israeli Centurions from the 7th Armored Brigade crushed an attack by nearly 80 Syrian T-55s, destroying 35 Syrian tanks for no losses of their own.<sup>123</sup>

These various failings reflected the real incompetence of Syrian tactical leadership. Syrian officers from brigade commanders on down rarely displayed any initiative, creativity, or independence in executing their missions. The worst case of this phenomenon was the failure of Syrian battalion and brigade commanders to seize the Jordan river bridges on 7 October after they had been redirected there and urged on by both the General Staff and their division commanders. The bridges were the decisive objectives of the entire Syrian campaign and they were within the grasp of four powerful Syrian formations, all of which failed to keep moving forward and take them. Whatever their reasons for stopping, there is no question that better commanders with even the slightest hint of initiative would have crawled the extra three miles if necessary to secure those bridges.<sup>124</sup>

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<sup>121</sup> See for instance, Kahalani, pp. 70-71.

<sup>122</sup> For concurring views on the general misuse of Syrian infantry, see, Asher, esp. p. 117; Dupuy, p. 590; El Edroos, pp. 521-522, 537; O'Ballance, *No Victor, No Vanquished*, p. 133; General D. K. Palit, *Return to Sinai: The Arab Offensive, October 1973*, (Dehra Dun: Palit and Palit Publishers, 1974), pp. 98-99; Wakebridge, p. 29.

<sup>123</sup> Asher, pp. 102-103, 227-237; Kahalani, pp. 127-137. See also, Insight Team, p. 177; O'Ballance, *No Victor, No Vanquished*, pp. 134-138, 218.

<sup>124</sup> Several theories have been offered to explain the Syrian failure to secure the bridges over the Jordan on 7 October when they were within miles of the river and faced only meager Israeli defenses. Some have argued that the problem was Syrian logistics, claiming that Syrian units were largely out of fuel by late on 7 October and so could not physically reach the bridges. (See for example, Ashkar, "The Middle East Conflict," p. 6; Moreaux, March 1986, p. 26) This explanation is highly dubious, and largely appears to have been devised by apologists for the Syrians well after the fact. Although some Syrian tanks were found after the war to have been abandoned for lack of fuel, Syrian commanders interviewed soon after the war made no mention of logistical difficulties as the cause of their halt on 7 October. (See for example, Dupuy, pp. 456-457; O'Ballance, *No Victor, No Vanquished*, pp. 134-137; and Wakebridge, pp. 26-30. Dupuy, O'Ballance and Wakebridge all interviewed numerous Syrian officers after the war and when specifically questioned about this halt, none mentioned supply deficiencies. Indeed, Wakebridge goes to some length to demonstrate that this theory is incorrect.) There is no indication that Syrian units were suddenly refueled during the night, yet they fought vigorously the next day. Finally, there is no question that even if all four Syrian brigades had been desperately short of fuel each still could have pooled its assets and sent at least a



Syrian junior officers could not properly coordinate their actions with those of neighboring units, nor did they understand how to integrate their various combat arms into unified combined arms teams. Syrian commanders never thought to change their tactics: even after the Israelis repeatedly pummeled them in combat the Syrian formations kept attacking in exactly the same manner as before. Chaim Herzog remarked about Syria's tank commanders that, "they never departed from the doctrine implanted in them, and when situations for which they were not prepared arose, they proved in general to be at a loss."<sup>125</sup> Syrian tactical commanders also regularly neglected reconnaissance and patrolling, resulting in their frequent ambush by Israeli units lying in wait back from the roads, in the rough terrain of the Golan.

The failings of Syrian junior officers were thrown into sharper relief as the campaign unfolded. Initially, Syrian operations were fairly deft largely because they were following the detailed plans of the General Staff. As the fighting wore on, and especially in the southern and central Golan where combat became increasingly fluid, Syrian command authority was increasingly decentralized as a result of physical dispersion, and not necessarily as a result of a conscious decision by the Syrian high command. The more operational command devolved upon lower and lower levels of the Syrian hierarchy, the worse the Syrians did. For example, all of the successes of General

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battalion to cover the last few miles to take the bridges.

Others have speculated that the Syrians might have been using phase lines for the offensive and that various Syrian units had reached their phase line for the night and so stopped and made camp. (See for example, El Edroos, p. 495; Insight Team, pp. 159, 177). The conduct of the Syrian campaign suggests a much less formal approach to timing than this indicates, because during the initial battles Syrian commanders seemed interested in going as far and as fast as they could--nor were there other instances of units voluntarily stopping short of important objectives before or after this. In addition, the various Syrian division commanders clearly recognized the importance of securing the bridges as quickly as possible, so much so that al-Jehani diverted his best brigades from the major battle going on around Naffakh to take the bridges. Furthermore, even if it were the case that the Syrians were using phase lines, it should have been clear to every Syrian officer how important it was to take the bridges, and given the fact that both the General Staff and their division commanders believed it to have been the highest priority to take the bridges, the Syrian tactical commanders should have pushed the remaining miles to secure them. No commander in the world with the least bit of initiative would have failed to go the few extra kilometers to secure what were the crucial objectives of the entire Syrian campaign.

Based on the more detailed accounts of the Syrian operations, particularly Asher's descriptions, I suspect that the Syrian battalion and brigade commanders leading the Syrian drive on the Jordan called off their operations for the night primarily because they had outrun their command and control. It is fairly clear that by the time the Syrians began approaching the bridges, they were so far forward and so dispersed, that even their division commanders could not effectively control their operations. Command authority had effectively devolved upon the brigade and battalion commanders. With the loss of this guidance from higher authority, their operations became increasingly tentative, and when each column ran into even the slightest Israeli resistance it caused a disproportionate delay because the tactical commanders were unwilling to make important decisions on their own. Eventually, each column got so far away from the divisional headquarters that relatively minor Israeli resistance prompted them to call a halt for the night to allow the rest of the division to catch up and so that they could receive more detailed guidance from their superiors. (Indeed, the Insight Team of the *Times of London* notes that Syrian commanders stopped to await further orders, although they speculate that it was because the Syrians had reached their objectives for that day. See Insight Team, p. 177).

I believe this explanation fits the actual activities of the Syrians on 6-8 October better than the other two theories. However, what is most important in assessing Syrian combat performance is that, regardless of which theory one believes, it is still the case that at the end of the day on 7 October the Syrians had the vital Jordan river bridges within their grasp and their tactical commanders squandered this opportunity. Given how close the Syrians were to the bridges, and how slight the Israeli resistance was in front of them, good commanders would have found a way to take those bridges regardless of any other circumstances.

<sup>125</sup> Herzog, *The War of Atonement*, p. 275.

Turkmani's 9th infantry Division were a result of pre-planned and rehearsed Syrian operations, however, whenever Turkmani tried to improvise, such as his thrust up the ar-Rafid/al-Qunaytarah road to outflank al-Qunaytarah on 6 October, the operations turned into a fiasco because without the detailed guidance of the original operations orders, Turkmani's subordinates were helpless. Likewise, the attack on 9 October by the elite 70th Armored Brigade against Red Ridge came unglued when Israel's Lt. Colonel Kahalani, commanding the seven remaining tanks of the 77th Tank Battalion, seized an opportunity to counterattack into the seam between two of the Syrian battalions, causing both Syrian units to panic.<sup>126</sup> On 7 October, Syrian brigade and battalion commanders had failed to push on to seize the Jordan river bridges, despite the desires of the General Staff and the orders of their division commanders. By 8 October, the Syrians had lost so many tanks and APCs and were so dispersed that they had essentially lost the advantage of mass that had allowed them to prevail over the IDF in tactical combat in the preceding days. Consequently, the Israelis were increasingly able to halt and then drive back Syrian formations. Finally, by 9 October, the Israelis had built up sufficient tactical mass so that, although they still were outnumbered, they were able to begin forcing the Syrians off the Golan.

Syrian unit cohesion during the October war was not perfect, but overall was quite good. Syrian troops were remarkably brave and courageous, making repeated attacks despite the slaughter the Israelis repeatedly inflicted on them. In these attacks, Syrian units stuck together well, but the real test came when the Israelis went over to the offensive. By and large, Syrian formations hung together and fought back fiercely, although there were important exceptions such as the 47th Armored Brigade of the 5th Infantry Division, which did go to pieces under moderate Israeli pressure. Although divisions and even brigades were shattered as a result of Israeli penetrations and flanking maneuvers, the smaller Syrian sub-formations--platoons, companies and even battalions--maintained their cohesiveness and either stood their ground and fought until overcome or else retreated as whole units. Moreover, they generally conducted fighting withdrawals rather than simply fleeing. While many of these units were later caught and destroyed by (frequently smaller) Israeli forces, the fact remains that they maintained their unit integrity and attempted to conduct a good withdrawal.

#### *Additional Influences on the Course of the Fighting*

A few Syrian problems can be blamed on their reliance on the Soviet system, but only in those areas where Soviet doctrine was clearly wrong. For example, at that time, Soviet doctrine called for infantry to ride into battle buttoned-up in their APCs and to fight from their vehicles, firing small arms through the firing ports in the APCs' sides. This was the primary reason that the Syrians, unlike the Egyptians, generally did not have dismounted infantry preceding their armor with anti-tank weapons. These exceptions aside, the problem largely was not the tactics themselves but the Syrian application of those tactics. For example, the Soviets never intended for armored formations to plough straight ahead with no tactical maneuver at all. While the Soviets did plan to attack in waves, it was expected that some groups would penetrate enemy lines and these would then hit nearby enemy units in the flanks to aid the breakthrough of other units, thereby creating a sizable gap into which follow-on forces could pour. Similarly, the Soviets recognized that there were occasions--particularly assaults into bad tank terrain--in which the infantry had to dismount so that they could employ their anti-tank weapons to clear out enemy armor. These variations and subtleties seem to have been lost on Syrian units, who rigidly surged forward in an endless series of frontal assaults, succeeding only by weight of numbers and suffering crippling losses in the process.<sup>127</sup>

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<sup>126</sup> See Asher, p. 237; Kahalani, pp. 93-123.

<sup>127</sup> For concurring opinions that it was the Syrian implementation of Soviet tactics rather than the tactics

The Syrians have tended to blame most of their setbacks in the October war on the Israeli Air Force.<sup>128</sup> While the IAF certainly did play an important role in the combat on the Golan and the Damascus plain, its influence has been greatly exaggerated. In particular, the IAF is often given the lion's share of the credit for halting the Syrian advance on the Golan, and in particular for stopping the Syrian armored columns headed for the Jordan river bridges on 7 October. In both cases, this is untrue. First, the IAF flew comparatively few airstrike missions against Syrian ground forces between 6 and 10 October. On 6 October, the IAF concentrated on attacking the Egyptian bridges across the Suez, flying 197 ground-attack sorties against the Egyptians and only 26 against the Syrians. Beginning on 7 October, the Israelis did shift air assets to face the more dire Syrian threat, however, the lion's share of the ground-attack effort still went to the Sinai front, as table 9b below makes clear. Third, between 7 and 9 October, the crucial days of the ground fighting on the Golan, the IAF was concentrating primarily on Syria's SAM batteries. Thus, for example, on 7 October, probably the decisive day of the entire campaign, the IAF flew 271 ground-attack sorties against the Syrians, of which, only 98 were directed against Syrian combat units, the rest going against Syrian SAMs, and to a lesser extent, Syrian logistics columns. Moreover, we also know that a considerable number of IAF ground-attack sorties were directed not against the Syrian forces on the Golan, but on their second echelon forces. In particular, the 1st Armored Division received considerable attention from the IAF on its way to the front during the morning of 7 October. Thus, the actual number of Israeli ground-attack missions flown against the Syrian ground forces on the Golan was actually quite small.<sup>129</sup>

**Table 9b. Israeli Ground-Attack Sorties on the Northern and Southern Fronts by Day During the October War**

October	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
vs. Syria	26	271	188	168	230	353	158	NA	36	33	30	12	0	2	NA	55	22	42	0
vs. Egypt	197	116	434	442	296	69	154	96	NA	184	383	165	NA	357	376	154	532	354	315

NA - Strike sorties flown but number not available

Source: Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), pp. 25-34.

In recent years it also has come to light that the IAF's airstrikes against Syrian ground forces actually did surprisingly little damage. After the October war, the Israelis came to the conclusion that their ground-attack missions had been very poor. The Israelis found that they delivered their munitions inaccurately, and their aircraft were not responsive to the needs of ground commanders. In addition, they concluded that Syrian

themselves, see El Edroos, pp. 414, 537; John Keegan, *World Armies*, (London: Macmillan, 1979), p. 688; Moreaux, March 1986, p. 26; Palit, pp. 94-96; Wakebridge, p. 28.

<sup>128</sup> For Syrian claims that the IAF stopped the Syrian offensive, see for example Seale, *Asad*, pp. 209-210.

<sup>129</sup> Asher, pp. 248-249, 260; Cordesman and Wagner, pp. 25-28, 90-96; Dupuy, p. 465; Greenhous, p. 515.

air defenses, particularly AAA and the SA-7 shoulder-launched SAMs had badly degraded IAF strike missions. Trevor Dupuy was able to examine many of the Syrian tanks on the Golan shortly after the war and found no clear evidence that any were destroyed by air attack. While this must be balanced against the accounts by several observers indicating that Israeli airstrikes seemed to have a far more profound psychological impact on the Syrians than on the better disciplined Egyptians regardless of their physical impact, it is hard to make the case that the IAF was decisive in stopping the Syrian offensive.<sup>130</sup>

Perhaps the most important point on this issue is that regardless of the number of sorties the IAF flew, and regardless of the effect of those attacks, the simple fact is that the four Syrian armored columns bearing down on the Jordan river bridges were not stopped by airstrikes. The various accounts of the Golan fighting indicate that only the southernmost column--the 132nd Mechanized Brigade thrust south of the Sea of Galilee--was even attacked by Israeli aircraft. The other three columns encountered resistance only from Israeli ground forces, and even the 132nd Mechanized Brigade appears to have been stopped by the Israeli Super Shermans, not by the IAF.<sup>131</sup> Thus, Asher appears to be largely correct in stating that, "The Israeli Air Force's initial contributions on the Golan front were minimal."<sup>132</sup>

Later, after the Syrian medium-range SAM threat (the SA-2/3/6s) had been neutralized, the IAF was able to participate to a much greater extent in operations in the north. The Israelis provided very heavy air support to the initial drive into Syria itself. However, since the Syrians were mostly retreating, the IAF was used mostly to harass and pursue the fleeing Syrian units. The Israeli Air Force also played a considerable role in cracking the Syrian Sa'sa line, but after 12 October when the Iraqi intervention made the drive on Damascus impossible and the Egyptian front began to heat up again, the IAF was once again redirected south to the Suez front. Thereafter, the IAF conducted relatively few airstrikes in support of the ground forces in the north. Most Israeli air activity in the north after about 14 October was aimed at Syrian economic targets.

#### *Summary Judgments from the October War*

It is unclear how close the Syrians came to victory on the Golan heights in 1973. Even had they secured the Jordan river south of the B'nat Ya'acov bridge there were still points of entry on to the plateau to the north--the very routes from the Huleh valley the Israelis had used in 1967--and the northern prong of the Syrian invasion was never a threat to secure these access points. Even had the Syrians been able to retake the entire Golan, there is reason to believe that the Israelis could have mounted a successful counterattack from Galilee and once again driven the Syrians from the plateau. In short, there is no way of knowing how good or bad Syria's strategic concept actually was.

What is clear is that the Syrians paid a horrendous price for the successes they did secure primarily because of the limited capabilities of their tactical forces. According to one estimate, the Syrians lost over 200 of the 800 tanks employed in the initial assault in the first 24 hours of their offensive, and the actual number may be even higher.<sup>133</sup> The Syrian high command correctly appreciated that they would have to rely on mass to defeat the Israelis because they could not improve the proficiency of their forces to the extent necessary to prevail in tactical engagements. Instead, they would have to simply overwhelm the Israelis with superior numbers. This approach worked at first in the

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<sup>130</sup> Cordesman and Wagner, pp. 90-98; Dupuy, p. 456.

<sup>131</sup> See Asher, pp. 178-184; Dupuy, pp. 456-457; El Edroos, p. 495; Herzog, *The Arab-Israeli Wars*, pp. 289-291; Herzog, *The War of Atonement*, p. 104; Insight Team, pp. 159, 177-182; O'Ballance, *No Victor, No Vanquished*, pp. 136-137; Wakebridge, p. 29.

<sup>132</sup> Asher, p. 260.

<sup>133</sup> Palit, p. 98.

southern Golan, but only because the numerical imbalance plus the advantages of surprise were so enormous. In the north these advantages were still inadequate because of the slightly larger size and even greater competence of Israel's elite 7th Armored Brigade compared to the Barak Brigade defending in the south. Even in the southern Golan, the Syrian losses were so horrific and the Israeli mobilization so rapid that the numerical imbalance quickly diminished after only 24-36 hours. Although the Syrians probably outnumbered the Israelis in all relevant categories of combat power throughout the war, the problem was that Israeli tactical skills were so far superior to Syrian tactical skills that a numerical advantage of only 3:1 or 4:1 was wholly inadequate for the Syrians. Thus when Syria's armor failed to secure the Jordan-river bridges on 7 October, they blew their one chance to possibly prevent the Israelis from building up enough strength to drive the Syrians back off the Golan.

Syrian performance at the strategic level was far from perfect, but it is hard to assign them more than a small part of the blame for the defeat on the Golan. The initial Syrian plan was well conceived, and with a few problems that may have been the result of political decisions, it could have succeeded in retaking the Golan if Syrian tactical units had proven more capable of executing it. Perhaps the Syrians should have recognized just how badly outmatched they were in terms of tactical effectiveness and so should not have attacked at all. Perhaps. But that was a political decision, and given that Asad was determined to attack Israel, the plan the General Staff developed was a reasonable approach to the mission. After the initial assault failed, the Syrian General Staff did poorly, but by that point the war had already been decided. One must also balance this against the very creditable performance of Syria's division commanders, although they are not entirely blameless for some of the problems on 6 and 7 October.

The Soviets and the IAF have also been made scapegoats for the Syrian defeat. In both cases this has been greatly exaggerated. While some Soviet practices were flawed, overall the Syrians fought much better than they had in 1967. The Soviets had given the Syrians a full-fledged military doctrine, something the Syrians had never had before. In some ways, the Soviet approach was perfectly suited to the Syrians as it was designed to compensate for tactical incompetence. But Syrian tactical capabilities were so poor that they took good Soviet tactics and made them bad, and took bad Soviet tactics and made them worse. Ultimately, even the Soviet model could not overcome tactical incompetence as far-reaching as that of the Syrians. On the other hand, the IAF clearly contributed to the Syrian defeat, but its role, especially in stopping the initial ground thrust has been greatly distorted by the Syrians, some Westerners, and some members of the IAF themselves. For the most part, the IAF was far more destructive to Syrian ground forces during the Israeli offensive into Syria than it was against the Syrian attack into the Golan. Ultimately, Israeli ground forces played a major role in stopping the Syrians on the ground, but it was the Syrians themselves who essentially just stopped.

### **The Syrian Invasion of Lebanon, 1976**

Three years later the Syrians were at war once again, this time against the various leftist-Muslim militias participating in the Lebanese Civil War. Once again, the Syrians performed poorly, although their commandos proved to be considerably more competent than the rest of the army. Praetorianism and palace-guardism continued to abate as Asad maintained his iron grip on the armed forces and kept them focused foremost on external security operations. Commissarism remained at a high level, and even increased a bit as Asad did away with some practices he had been willing to tolerate in the name of greater combat efficiency against Israel before the October War. With that effort finished-and failed--he was no longer so tolerant, and tightened his control in certain areas. Moreover, the Soviet system continued to be the major influence on the Syrian armed forces.

### **Background to the Syrian Involvement**

It took the Syrian armed forces some time to learn from the experience of the October war. At first, they continued to skirmish with the Israelis along the ceasefire line, and political negotiations dragged on into 1975, preoccupying the Syrian military leadership. For the most part, in the aftermath of the October war, the Syrians blamed their defeat on their Soviet weaponry, and demanded that Moscow provide them with more modern and more powerful equipment. By 1976, the only lesson the Syrians had drawn from the 1973 war was that their commandos were the best troops in the army and the only ones with any real combat capabilities. As a result, a major expansion of the Syrian commandos was planned, but had only just gotten underway when Damascus decided to intervene in Lebanon.<sup>134</sup>

In 1975, a long-brewing civil war broke out in Lebanon. Essentially, this conflict pitted the "Rightist" or "Status Quo" coalition mostly centered on the ruling, minority Christian community against a "Leftist" or "Revisionist" coalition of mostly Muslims centered on Lebanese Sunnis, Lebanese Druze, and the PLO, which had relocated to Lebanon after its expulsion from Jordan in 1970.<sup>135</sup> Lebanon had long been an integral part of Syria prior to its separation by the French after World War I, and Lebanon was still closely tied to Syria. Consequently, the civil war there greatly concerned Hafiz al-Asad. In late 1975, Asad began to actively dabble in Palestinian affairs, surprisingly supporting the Maronite Christians rather than the Muslims. Syria began to send detachments of the Palestine Liberation Army (PLA), a force of Palestinians trained and mostly officered by Syrians to fight Israel, into Lebanon to aid the Maronites. Still, the Muslims continued to make gains in Lebanon, forcing the Christians back into their mountain enclave northeast of Beirut and nibbling away even at this. By the spring of 1976, the position of the Christians had become so serious that Asad decided to set aside the fig leaf of the PLA and openly employ Syrian military forces to prevent the defeat of the Christians.<sup>136</sup>

### **The First Syrian Offensive**

The Syrians greatly underestimated the forces they would require to accomplish their goals in Lebanon. Damascus hoped to drive into Lebanon, push the Muslim forces back from the Christian enclaves, and then occupy the urban centers from which the Muslims mainly drew their strength: West Beirut and the coastal cities of south Lebanon such as Tyre and Sidon. The Syrians expected that the mere appearance of a conventional army equipped with tanks and artillery and supported by aircraft would overawe most of the Muslim militias, and the rest could be dispatched with little effort.

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<sup>134</sup> Anthony Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, (Lanham, MD: University Press, 1987), pp. 1189-119; Richard Gabriel, *Operation Peace for Galilee*, (NY: Hill and Wang, 1984), p. 119; Moreaux, March 1986, p. 26; Mark Urban, "Fire in the Galilee, Part 2: Syria," *Armed Forces*, Vol. 5, May 1986, p. 209.

<sup>135</sup> On the composition of these various camps, see Itamar Rabinovich, *The War for Lebanon, 1970-1985*, Revised Edition, (Ithaca, NY: Cornell University Press, 1985), pp.60-88.

<sup>136</sup> I have no intention of trying to wade into the debate over Asad's motivations in invading Lebanon on the side of the Christians, rather than the Muslims. There are any number of theories that purport to explain Asad's thinking, some of which are better than others. However, none has sufficient empirical proof to stake an exclusive claim to the truth. Indeed, my own guess is that a number of different factors probably combined to push Asad toward invasion. For a number of arguments on this issue, see Robert Fisk, *Pity the Nation: The Abduction of Lebanon*, (NY: Atheneum, 1990), pp. 80-91; Dilip Hiro, *Lebanon: Fire and Embers*, (NY: St. Martin's, 1992), pp. 33-44; Hopwood, pp. 60-62; Itamar Rabinovich, "The Changing Prism: Syrian policy in Lebanon as a Mirror, an Issue and an Instrument," in Ma'oz and Yaniv eds., pp. 179-184; Rabinovich, *The War for Lebanon*, pp. 36-37, 47-56, 85-88, 201-236; Rudolph, pp. 202-204; Seale, *Asad*, pp. 267-289; Weinberger, pp. 95-213.

Thus, they put together an invasion force of about 6,000 men, comprising roughly a brigade from the 3rd Armored Division plus a number of commando units and other supporting forces.<sup>137</sup>

The invasion began on 1 June 1976 with assaults from both the east and the north. In the north, a force of about 2,000 Syrian troops and 60 T-54 tanks drove down the Lebanese coast toward Tripoli. This detachment faced little resistance, quickly relieved the sieges of the Christian towns of Qubiat and Anarqiat, and then pushed on to Tripoli where they were halted by Muslim resistance and forced to besiege the city. In the east, the main Syrian force of about 4,000 men centered on a T-62/BMP-1-equipped armored brigade of the 3rd Armored Division drove into Lebanon along the Beirut-Damascus highway. The Syrians quickly occupied the Bekaa valley without facing much resistance, except in the far south in the Palestinian enclave known as "Fatahland," and then continued their drive on Beirut. As the Syrians began to move through the Lebanon mountain range they were suddenly confronted with Muslim roadblocks and anti-tank ambushes that stopped them cold. Damascus was forced to commit another armored-brigade task force from the 3rd Armored Division to get the drive started again and then only with considerable losses.<sup>138</sup>

Once past the Lebanon range the central Syrian force split into two columns. Most of the detachment continued on along the Beirut-Damascus highway toward Beirut, while a reinforced armored brigade was sent south to take Sidon. Neither force did well. The task force heading toward Sidon faced serious Muslim resistance along the narrow mountain roads of central Lebanon. The Syrians attacked toward Sidon without proper reconnaissance or flank guards and relying mostly on tanks with only a small component of mechanized infantry. This offensive ran into an anti-tank ambush outside the city and in a firefight that lasted for several days, the Muslims held their ground and inflicted heavy casualties on the Syrians. Although neither side was terribly skillful, without infantry the Syrians were at the mercy of the Muslims who were well supplied with ATGMs and RPGs. Eventually the Syrians were able to extract their armor from this ambush, but only after losing a number of T-62s and BMPs.<sup>139</sup>

The Syrians then launched another attack into Sidon relying on commandos to lead the charge while their tanks and artillery provided fire support from a distance. The commandos were able to advance into the city under air cover, but were then trapped by larger Muslim forces, compelling the Syrians to employ helicopters to bring in supplies and bring out the wounded. The Syrians sent a relief force of armor which charged into the town to extract the commandos only to be ambushed by the Muslims and mauled. Eventually, the Syrians were able to pull back from the city, but with painful losses.<sup>140</sup>

The Syrian forces advancing on Beirut encountered virtually the same problems. There as well, the Syrians led their drive with armor but failed to provide the tanks with adequate infantry, artillery, and helicopter support, or to deploy adequate flank guards or patrols. Consequently, the armored vanguards were repeatedly ambushed by Muslim forces equipped with ATGMs and RPGs. As in the south, the Syrians halted, regrouped and then resumed their advance with commandos in the lead. Here as well, the commandos were able to punch into the city, but without armor or artillery support they were set upon by larger Leftist forces and trapped. Initially, the Syrians were able to keep the commandos resupplied by helo-lift, but later had to pull them out as casualties began to mount. By 10 June, the Syrians had pulled back from both Beirut and Sidon, and on

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<sup>137</sup> Lt. Colonel Daniel Asher, IDF, "The Syrian Invasion of Lebanon: Military Moves as a Political Tool," *Ma'arachot*, June 1977, p. 3; Rabinovich, *The War for Lebanon*, p. 55. Weinberger, p. 213.

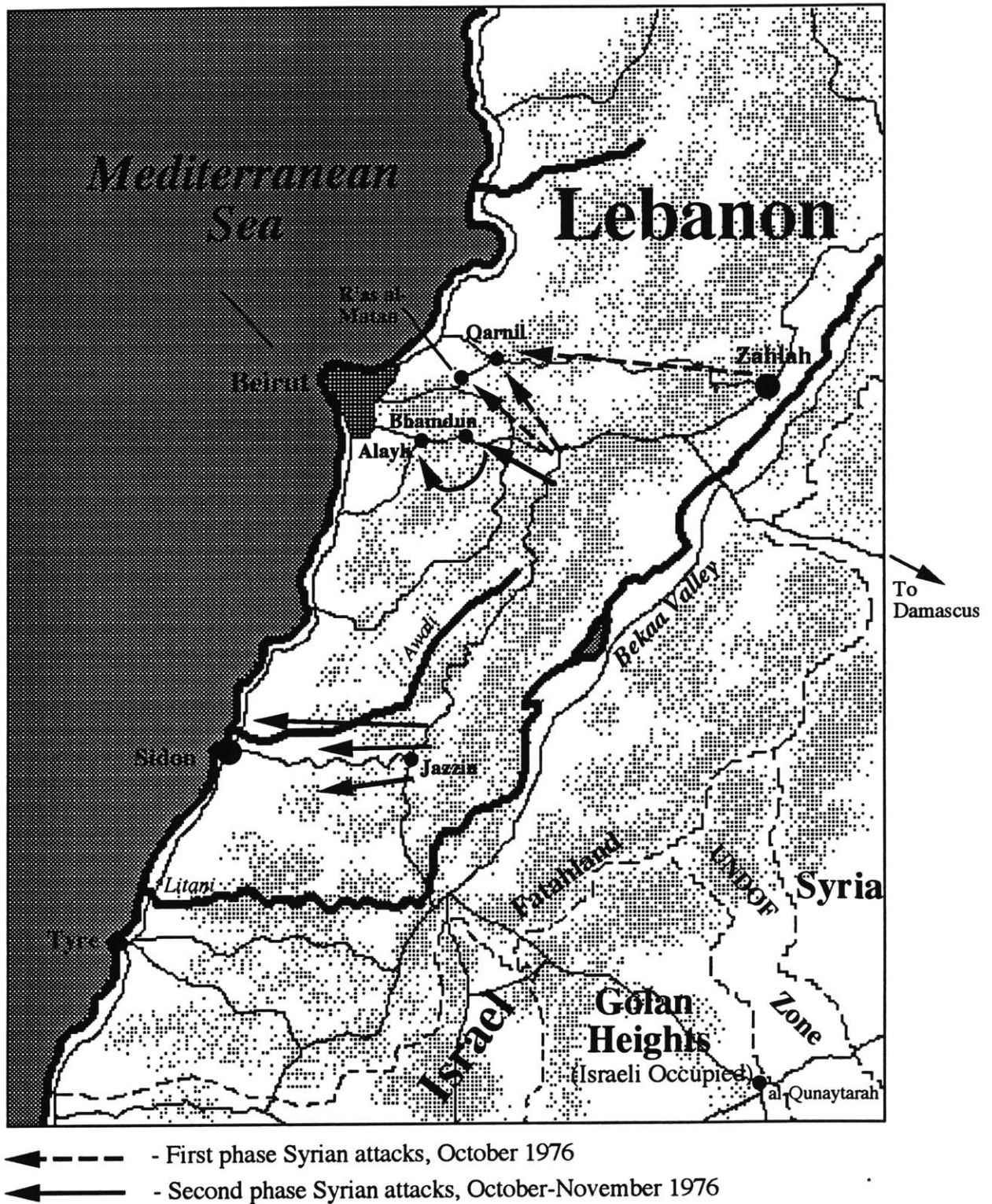
<sup>138</sup> D. Asher, pp. 5-6; Seale, *Asad*, pp. 283-284.

<sup>139</sup> D. Asher, pp. 5-6; Fisk, p. 85; Seale, *Asad*, p. 284; Lawrence Whetten, "The Military Dimension," in P. Edward Haley and Lewis Snider, *Lebanon in Crisis*, (Syracuse, NY: Syracuse Univ. Press, 1979), p. 80.

<sup>140</sup> D. Asher, p. 6; Whetten, p. 80.



# The Second Syrian Offensive in Lebanon, September-October 1976





20 September they were forced to sign a ceasefire in which they agreed to pull back from Tripoli, Beirut, Sidon and other towns.<sup>141</sup>

### **The Second Syrian Offensive: The Mountain Campaign**

The June invasion had been a humiliating fiasco for the Syrians, and they spent the summer licking their wounds and planning for a new offensive. By September, they were ready for another try. They had reinforced their contingent in Lebanon so that the entire 3rd Armored Division was now present. The Syrians also added the 47th Armored Brigade, as well as more commando units, and other supporting forces. Altogether, the Syrians probably had about 22,000-25,000 troops and 500-600 tanks in Lebanon. In addition, the Syrians made an important tactical change after their experience in June: they adopted a doctrine of reliance on massive firepower. Thereafter, the Syrians operated by advancing cautiously and whenever they encountered any opposition, rather than advancing to grapple with the enemy, they would stand back and saturate the area with fire from artillery, tanks, mortars, airstrikes and helicopter gunships.<sup>142</sup>

The new Syrian offensive was designed to once again secure Beirut and the southern coastal cities, however, this time it would be conducted in two phases. In phase I the Syrians would clear the area around the Beirut-Damascus highway and gain access for a sustained presence in Beirut. In phase II, the Syrians would then drive on Sidon, taking the city and clearing the surrounding area of Leftist forces.<sup>143</sup>

#### *Preliminary Operations East of Beirut*

The first phase kicked off on 28 September 1976. An armored brigade task force drove northwest along the Beirut-Damascus highway itself, and linked up with a Maronite force under Bashir Gemayal at R'as al Matan. Meanwhile a mechanized brigade task force drove north from Zahleh and then west toward Qarnil, where it linked up with another Maronite force under Amin Gemayal. The mechanized brigade task force faced little Muslim opposition, which generally retreated after initial contact with the Syrians. They harassed the Syrian vanguard, but withdrew whenever the Syrians brought up additional forces to concentrate their firepower against the Muslims. In the face of this minor harassment the Syrians were able to clear the main route north of the Beirut-Damascus highway. The Syrian armored brigade task force on the other hand, faced stiff resistance along the Beirut-Damascus highway. In particular, the commando units that led the advance took heavy casualties because, as in the past, they failed to take adequate precautions and were repeatedly mauled by Leftist ambushes that could only be dispersed by bringing up armor and artillery to pound the Muslim positions. Nevertheless, the Syrians kept pushing forward, ignoring the casualties among the commando units, and eventually they and the Maronites were able to capture the Muslim stronghold at R'as al Matan. While this operation was far from elegant, it succeeded in relieving the Leftist pressure against the southern perimeter of the Christian enclave, and cleared the Beirut-Damascus highway to the eastern outskirts of Beirut, giving the Syrians a firm base of operations for a future drive on Beirut.<sup>144</sup>

On 12 October, the Syrians launched the second phase of their campaign, with offensives toward Beirut and Sidon. Another important lesson the Syrians had learned from their defeat in June was that in the mountains it was best to move over multiple, parallel axes so that if any one route was blocked the advance would not stall altogether. Thus, against both Sidon and Beirut, the Syrians advanced on three separate axes: a primary axis along the main route westward into the city and then two supporting efforts,

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<sup>141</sup> D. Asher, p. 6; Whetten, p. 80.

<sup>142</sup> D. Asher, pp. 8-9; Eisenstadt, p. 21; Rudolph, pp. 202-203; Whetten, p. 82.

<sup>143</sup> D. Asher, pp. 8-9; Rudolph, pp. 202-203; Whetten, p. 82.

<sup>144</sup> D. Asher, pp. 9-12, 15; Rabinovich, *The War for Lebanon*, p. 55.

one to the north and one to the south.

### *The Drive on Sidon*

The assault on Sidon began on 12 October with an hour long artillery bombardment, after which the three Syrian task forces set out. The central force consisted of an armored brigade and a full commando brigade. The southern column was another armored brigade, while the northern column was mainly Christian militiamen stiffened with Syrian commandos. In the center, the Syrians immediately hit fierce resistance from the Muslims, and their lead units were once again caught in an ambush. The Syrians then brought up a true combined arms team consisting of tanks, infantry, artillery and helicopters to break up the Muslim defenses, however, the Syrians were forced to move extremely slowly to make their combined-arms coordination work. This ponderous pace and their inability to really properly integrate the different elements resulted in considerable Syrian casualties and soon brought the entire advance to a halt. The southern thrust was similarly stopped in its tracks by a Leftist anti-tank ambush. The Syrians tried two very obvious and poorly executed flanking moves to clear this roadblock, but both tries failed. In the north, the Maronites and Syrian commandos met little resistance but moved frustratingly slowly.

On 14 October, the Syrians were forced to commit additional forces to try to jump-start the drive on Sidon. Even with the fresh units, however, the main Syrian column in the center could only make slight advances, and each mile was bought with dead soldiers and destroyed tanks. The Syrian reinforcements finally allowed the southern column to begin making some headway against the Muslims, but here as well their advance was slow. In the north, however, the slow but steady advance of the Maronites and commandos against minor Leftist forces allowed them to reach the mouth of the Awali river north of Sidon late on 15 October. The mouth of the Awali was within artillery range of Sidon and the Syrians immediately rushed as many guns there as they could scrape together to pound the city into submission. This was good enough for Damascus, and so the embarrassing and painful advances along the central and southern routes were ordered to halt.<sup>145</sup>

### *The Drive on Beirut*

The Syrian offensive against Beirut in October picked up where the September campaign left off. The main Syrian advance was to be along the Beirut-Damascus highway with supporting columns on either side. The push down the Beirut-Damascus highway was mostly an armor assault, supported by large numbers of commandos. In the north, the Syrians employed infantry, along with commandos and Maronite forces. Last, in the south the Syrians relied on a combined armor-mechanized infantry task force. The central attack along the Beirut-Damascus highway was quickly slowed to a crawl by heavy Muslim resistance, while the infantry attack to the north made only slightly better progress. In the south, the Syrians had hoped to outflank their first objective, the well-defended town of Bhamdun. The Syrian forces were able to get south of the town, but were then driven back with heavy losses when they tried to take the defenses of the town from its southern flank.<sup>146</sup>

The push toward Beirut did not improve very much thereafter. In the north, the Syrians were halted with considerable loss by a sizable Leftist counterattack. In the center, the Syrians found a way to bypass some of the Muslim positions but could only push a few more miles forward. In the south, the Syrians decided to bypass Bhamdun, and instead moved on and seized the heights overlooking the Muslim stronghold at Alayh. The Leftists defeated a Syrian assault on Alayh and Damascus opted to bring up

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<sup>145</sup> D. Asher, pp. 14-15.

<sup>146</sup> D. Asher, pp. 15-16.

additional artillery and simply shell the town. Meanwhile, the central and northern columns had ground to a halt with little hope for additional progress. By 15 October, this second Syrian drive on Beirut had petered out after having advanced only 8-10 kilometers toward the Lebanese capital.<sup>147</sup>

While the Syrian military achievements were paltry, they turned out to be sufficient to serve Syrian political objectives. Alayh was only about 12 kilometers from the heart of West Beirut, and Asad could threaten to employ artillery against the city as he did at Sidon. While it is unclear to what extent this threat was taken seriously by the Leftists, the repeated Syrian offensives had demonstrated to them that the Syrians were not going to give up and go home. On the other hand, the fighting had taken its toll on the Muslim militiamen who were exhausted and short on anti-tank rounds. It was unclear to them just how many more Syrian offensives they could successfully withstand. Finally, the Syrians' slow advance appeared to the rest of the Arab world as a deliberate Syrian "steamroller" assault to crush the Muslims, and this impression prompted the Arab League to step in and broker a ceasefire arrangement in late October. Because of the perception of Syrian progress, and the Leftists' recognition of their precarious military situation, this agreement gave Syria much of what it had sought. It legitimized the Syrian presence in Lebanon and effectively turned over control of much of the eastern and central regions of the country to Damascus, in return for Syria's agreement not to drive the PLO out of southern Lebanon and to pull back from the coastal areas.<sup>148</sup>

### **General Observations on Syrian Military Effectiveness During the Invasion of Lebanon**

Syrian performance in the 1976 invasion of Lebanon showed little improvement since the October war. Unfortunately, we lack unclassified accounts of the fighting that provide sufficient detail to assess more than a few selected areas of Syrian performance. For example, even the first-class campaign history presented in the IDF's General Staff journal, *Ma'arachot*, fails to describe Syrian tactics. Nevertheless, a number of conclusions can still be drawn.

The first point that needs to be made is that the Muslim resistance was a small, pathetic, faction-riven group with little combat capability. Most of the Muslim fighters were "militiamen:" local recruits taught to fire a Kalashnikov or an RPG and little else. Their command and control system was rudimentary and hobbled by a lack of communications equipment and ruinous personal animosities. By comparison, the Israelis were able to defeat these same Muslim forces fairly easily when they invaded in 1978 and again in 1982--although even then many Palestinians fought with great determination. In fact, the Muslims were considerably stronger by the time of the full-scale Israeli invasion in 1982 than they were in 1976, having received considerably more military hardware and training from Syria and other Arab states after Syria flip-flopped and sided with the Muslims in the wake of the Camp David accords.

Many of Syria's problems must be laid at the doorstep of its senior military and political leadership. First, it is clear that they misunderstood both the size and the nature of the opposition they faced in Lebanon. As a result, they failed to deploy adequate force to accomplish their objectives and on several occasions had to send sizable reinforcements to reinvigorate their offensive. Second, closely related to the first, they had not learned from the October war that their tactical formations were severely limited in their capabilities and so their calculus had to change to take into account these limitations. Third, they failed to prepare their forces adequately for combat in the mountains. Syrian forces apparently had not been trained in mountain warfare and so

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<sup>147</sup> D. Asher, p. 16.

<sup>148</sup> Hiro, pp. 43-44; Rabinovich, "The Changing Prism," p. 183; Rabinovich, *The War for Lebanon*, p. 56; Seale, *Asad*, pp. 285-286.

constantly floundered about trying to apply tactical doctrine designed for good terrain in the worst tank terrain imaginable. Finally, the Syrian high command failed to recognize *a priori* that they were facing a guerrilla opposition and so would have to train their troops in counterinsurgency (COIN) operations and structure their moves accordingly.

Nevertheless, Syria's tactical performance was equally bad. The most obvious problem was their general disregard for combined arms operations. The initial Syrian invasion relied almost exclusively on armor, and was dangerously short of infantry to deal with the Muslim anti-tank ambushes along the mountain roads. Similarly, Syrian commanders never really employed their combat engineers to try to clear routes of advance around enemy positions or breach enemy roadblocks. Instead, the Syrians simply tried to bull their way through the Muslim positions with armor, making it relatively easy for the Leftists to destroy their tanks with RPGs, mines, recoilless rifles, and Molotov cocktails. Syrian artillery essentially was used only in preparatory bombardments and then sat silent through the rest of the battle--although this was as much a product of the inability of Syrian artillery to accurately target Muslim positions as it was a sign of a lack of understanding of combined arms cooperation. Indeed, in one of the only counterbattery engagements of the campaign, Syrian artillery could not silence a small number of Muslim guns being used to defend the Bhamdun stronghold. During the fall offensives, the Syrians made some effort to integrate infantry, artillery, armor and helicopters, but this proved so difficult for them to make work properly that it slowed down their pace of advance and then fell apart in combat.<sup>149</sup>

These failures with combined arms operations led the Syrians to rely instead on overwhelming firepower as the solution to their tactical problems. This approach was not very much more effective because the Syrians generally could not bring to bear the firepower they had available, and the Muslims fled into the mountains whenever the Syrians began to cause damage. Mark Urban commented that:

The Syrians lack offensive spirit and a grasp of mobile warfare. Instead, they prefer to fight positional battles of attrition. Targets are pounded for days by heavy artillery before cautious ground thrusts are put in. Their lack of tactical skill is compounded by poor coordination between arms. One Western expert who has witnessed many Syrian operations in Lebanon told me "they would pound a target all day with artillery then send in the tanks and infantry a day or two later. They didn't seem to be able to organize fire support on the same day, let alone the same hour, as an attack."<sup>150</sup>

As a final note, Syrian adherence to Soviet doctrine was not quite so pronounced as in 1973. In particular, the Syrians did not rely on Soviet mountain warfare doctrine. Soviet mountain warfare doctrine stressed reliance on combined arms operations, especially the use of infantry and engineers supported by heavy weapons fire where practicable. Also, the Soviets emphasized employment of flying columns and air-insertion of infantry forces to seize key chokepoints before they could be blocked and fortified. To a great extent, it appears that the reason the Syrians did not use Soviet methods for mountain warfare was that they had never learned these tactics. Soviet training of Syrian forces almost certainly focused on armored operations in good terrain (or perhaps rough terrain, such as would be found on the Golan) because this was most relevant to Syrian military missions. It is unlikely the Syrians requested specific Soviet training for mountain operations for their troops because Damascus did not seem to have recognized the need for a different kind of training for Lebanon's mountainous terrain.<sup>151</sup>

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<sup>149</sup> See D. Asher, esp. pp. 16-17.

<sup>150</sup> Urban, "Fire in the Galilee, Part 2," p. 210.

<sup>151</sup> See D. Asher, p. 16.

### **The Israeli Invasion of Lebanon, 1982**

Syrian performance in Lebanon in 1982 was better than in the past, but was still very mediocre. The Syrians learned to rely heavily on their expanded commando forces, and the somewhat greater abilities of these elite forces, coupled with Lebanon's outstanding defensive terrain and Israeli political and military gaffes, prevented a disaster such as in 1967 or 1973. To some extent, these factors created a facade of improvement that masked the presence of the long-standing problems that had hamstrung every prior Syrian operation. Nor had there been considerable change in other factors related to Syrian military performance. Commissarism remained a stifling presence, while palace-guardism had crept back to a certain extent as some Syrian units spent as many as six years performing occupation duties in Lebanon rather than training for conventional military operations. The Syrian economy began to pick up in the early 1980s, however, this start was too late to have affected Syrian soldiers and officers already in the military in 1982. For the most part, educational levels and technical skills in the Syrian military still remained below those achieved for the October War when Damascus went out of its way to recruit personnel with technical training and university degrees.

#### **Syrian Military Reforms and Reorganization**

In the late 1970s, after the Syrians had settled into their occupation of eastern Lebanon, the Syrian military began to make changes in accordance with the lessons it had taken away from its experiences against Israel in 1973 and against the Muslim coalition in Lebanon in 1976 and thereafter. The Syrians made no changes to their tactical doctrine, suggesting either that they believed it to be adequate, or that they could see no potential alternatives. Instead, most Syrian changes were made to their force structure.

First, Damascus concluded that it required even greater mass to defeat the Israelis, still its principal adversary. The Syrians set about increasing the size of their armed forces generally, as well as increasing the size and number of its combat formations. For instance, the number of tanks in each tank battalion was increased, and Damascus created a new armored division, the 569th. To fill out this newly expanded force structure, the Syrians began importing even larger numbers of weapons and equipment with considerable Soviet aid. This vast buying spree received additional impetus from Egypt's "defection" from the Arab confrontation against Israel after the Camp David accords. With Egypt gone from the Arab order of battle against Israel, Syria felt it had to shoulder more of the military burden, and this meant a bigger, stronger military. By 1982, the Syrian armed forces had expanded to some 250,000 men, 3,600 tanks, 2,700 APCs, 2,300 artillery pieces, 80 SAM batteries, and 500 combat aircraft.<sup>152</sup>

Second, Damascus began to restructure its army to try to emphasize its areas of strength and diminish areas of weakness. The Syrians concluded that their "leg" infantry units were effectively useless and moved to convert all of them to mechanized infantry and armored formations. The entire 9th Infantry Division was reconfigured as an armored division. The Syrians also greatly increased the number and mobility of their tactical air defense assets by buying additional SA-6 launchers as well as newer SA-8s. Of particular importance, the Syrians concluded that only their commando units had shown any real skill in combat. In response, the Syrians dramatically expanded the size

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<sup>152</sup> Cordesman and Wagner, pp. 109, 118, 277-278; Cordesman, *The Arab-Israeli Military Balance*, p. 45; Eisenstadt, pp. 24-25, 28, 98-99.

of their commando forces from seven to thirty-three battalions.<sup>153</sup> They did this by stripping most of the best personnel from their infantry units before they were converted to mechanized formations, as well as diverting many of the most promising new recruits to the commandos. After their experience in Lebanon, the Syrians intended to use their commandos like their Egyptian counterparts, as both special forces teams employed in non-conventional missions and as "shock" troops to spearhead offensives and man key defensive positions. In Lebanon, the Syrians began to attach commando units to armored formations, and vice versa. While the expansion of the commandos and their new missions gave Syria a small force of quite competent soldiers, it also greatly degraded the skill levels of other Syrian units by stripping them of many of their most competent personnel.<sup>154</sup>

Politicization of the Syrian military remained at about the same level as it had been prior to the October War and may have even increased slightly. Asad continued to encourage the promotion of competent junior officers, and tried to keep the military focused on the external security mission. However, there were still strong elements of commissarism present in every aspect of Syrian military life. By the late 1970s, Asad had firmly ensconced his Alawi loyalists throughout the armed forces. Key military formations such as the Defense Companies, the commandos, the Republican Guard, and the 3rd and 569th Armored Divisions were officered almost entirely by Alawis and the majority of their enlisted personnel were also Alawi. Similarly, by 1977 eighteen of the top twenty-five slots in the Syrian armed forces were held by Alawis, although Alawis comprised only 11 percent of the population. Asad also continued to ruthlessly purge any officers who demonstrated their disloyalty to his regime and in 1978 he cashiered 400 officers who opposed his invasion of Lebanon. The Lebanese involvement had created other problems related to politicization. First, most Syrian troops in Lebanon were performing policing duties and so were not training for conventional military operations. Second, Syrian soldiers in Lebanon rapidly got sucked into smuggling, narcotics, and other illicit activities.<sup>155</sup>

### **Background to the Israeli Offensive**

In June 1982 the Israel Defense Forces invaded southern Lebanon. Ever since the Palestinian expulsion from Jordan in 1970-1971 and their subsequent resettlement in Lebanon, Israel had been harassed, shelled, attacked and raided by Palestinian guerrillas based in Lebanon. The Palestinian presence had been a major contributing factor to the outbreak of the Lebanese Civil War in 1975, which had caused Lebanon to decline into chaos and had triggered the Syrian occupation. By the late 1970s, Lebanon's instability had deepened while Palestinian attacks increased in size and scope. By the early 1980s, key members of the right-wing Israeli cabinet were determined to "solve the Lebanese problem" with military force and began trying to provoke Palestinian actions that could justify a full-scale invasion. In 1982, the Israelis found the pretext they were looking for, and sent their military north to conquer southern Lebanon, destroy the PLO, expel the Syrians, and set up a new Lebanese government that would be willing to make peace with Israel and able to keep the Israeli border safe and quiet.

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<sup>153</sup> Syrian commando battalions are considerably smaller than normal infantry battalions with only about 200-250 men. Consequently, the expansion of Syria's commandos entailed a shift from about 1,500-2,000 commandos to about 10-15,000 commandos.

<sup>154</sup> Anthony Cordesman, *The Arab-Israeli Military Balance*, pp. 118-119; Eisenstadt, pp. 29, Gabriel, *Operation Peace for Galilee*, p. 119; Moreaux, March 1986, pp. 26, 30; Urban, "Fire in the Galilee, Part 2," p. 209.

<sup>155</sup> Hanna Batatu, "Political Power and Socieal Structure in Syria and Iraq," in Samih K. Farsoun ed., *Arab Society: Continuity and Change*, (London: Croom Helm, 1985), p. 37; Moreaux, March 1986, p. 30; Urban, "Fire in the Galilee, Part 2," p. 209.

## The Opposing Forces

The Syrian forces in Lebanon in 1982 were primarily an occupation force, and were unprepared for large-scale combat with the Israeli military. The Syrians had two substantially reinforced heavy brigades in Lebanon at the time of the Israeli invasion. The 62nd Armored Brigade was bivouacked in the Bekaa valley and the 85th Mechanized Brigade was deployed along the Beirut-Damascus highway east of Beirut. In addition, the Syrians had at least 10 battalions of commandos operating throughout Lebanon. Altogether, there were about 30,000 Syrian soldiers with 200-300 tanks deployed in eastern and central Lebanon. The Syrians also had 16 batteries of SA-2/3/6 SAMs deployed in the Bekaa. Later, the Syrians would commit the 1st Armored Division, additional SAM batteries and then the 3rd Armored Division to the fighting, however, when the Israelis first invaded these divisions were still deployed around Damascus and the Golan. In addition, as noted above, the Syrian forces in Lebanon had been badly compromised by graft and a general inattention to combat training.<sup>156</sup>

The Israelis on the other hand put together a massive force including many of the finest units in the Israeli Army. For the invasion, Tel Aviv's Northern Command deployed nine divisional ugdot plus a variety of smaller formations. These forces totaled 76,000 men, 1,250 tanks, and 1,500 other armored vehicles. In addition, the Israelis would have the entire IAF, 650 combat aircraft, at their disposal. One problem the Israelis did face was that many of the units that participated in the operation were reserve units that could only be called up a few days before the start of the offensive, and so had very little time to prepare themselves for war.<sup>157</sup>

Several other factors weighed in the balance of forces. Israeli equipment was mostly superior to Syrian weaponry, and in some areas was literally generations ahead. For example, the Israelis flew state-of-the art F-15s and F-16s while the Syrians had only older Soviet MiG-21s and MiG-23s. Likewise, although few realized it at the time, the new Israeli-developed Merkava tank was years, even decades, ahead of the T-72s in the Syrian arsenal. However, Israel's greatest advantages were in the areas of command and control, intelligence, and electronic warfare where they were simply in a different league. There were a few categories--such as APCs and perhaps artillery--where Syria's Soviet-made weapons were superior to those of the Israelis, but these were the exceptions to the rule.

On the other hand, the Syrians were holding superb defensive terrain. The mountains of Lebanon were tremendous obstacles to an invading force because they channeled movement along narrow ledges, valleys, and wadis. Moreover, the Syrians had been occupying this terrain for seven years and had generally become accustomed to operating in it, whereas the Israelis had never really planned or trained to fight in the mountains.<sup>158</sup>

## The Israeli Plan

Israel's campaign plan for the invasion of Lebanon was very complex and extremely ambitious. The Israeli General Staff, goaded by Defense Minister Ariel Sharon, hoped to accomplish three major tasks in four days. The IDF was expected to, 1) occupy Lebanon up to and including the Beirut-Damascus highway and besiege Beirut, 2)

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<sup>156</sup> Col. Trevor N. Dupuy and Paul Martell, *Flawed Victory: The Arab-Israeli Conflict and the 1982 War in Lebanon*, (Fairfax, VA: Hero Books, 1983), p. 90; Seale, *Asad*, p. 377; Wald, pp. 41-47.

<sup>157</sup> Cordesman and Wagner, p. 118; M. Thomas Davis, *40Km Into Lebanon*, (Washington, DC: National Defense University Press, 1987), pp. 78-84; Dupuy and Martell, pp. 91-94; Gabriel, *Operation Peace for Galilee*, pp. 75-81; Ze'ev Schiff and Ehud Ya'ari, *Israel's Lebanon War*, Edited and translated by Ina Friedman, (NY: Simon and Schuster, 1984), pp. 110-117.

<sup>158</sup> On the imbalance in weapons technology, the best source is Cordesman and Wagner, pp. 155-216. On the terrain of Lebanon as a battlefield, see the discussions in Dupuy and Martell, pp. 83-85; and Gabriel, *Operation Peace for Galilee*, pp. 70-75.

destroy the Palestinian paramilitary units in Lebanon, and 3) beat up and expel the Syrians from Lebanon. The Israeli plan, an updated version of their "Big Pines" contingency plan, called for multiple penetrations into Lebanon by Israeli mechanized columns diverging to isolate Palestinian and Syrian forces, and then converging again to envelop and trap them.

In the west, the Israelis planned to employ three *ugdot* to destroy the Palestinians and drive on Beirut. A huge *ugdah* of one armored brigade, three mechanized infantry brigades, a paratrooper brigade and an infantry brigade would drive up the coast, its armored brigade serving as a flying column to push north, bypassing populated areas, while the rest of the force invested and later reduced the various Palestinian strongholds in the major coastal cities. Another *ugdah* would make an amphibious assault to secure the mouth of the Awali river to allow the rapid passage of the armored brigade driving up the coast. Meanwhile, a third *ugdah* would move into central Lebanon and then at various points would detach sub-units to drive westward to the coast. These forces would thus be in a position to outflank any opposition that threatened to block the armored brigade moving north along the coastal axis.

The main Israeli forces, however, were located in the east to deal with the Syrians. Here the Israelis had put together an intricately-timed operation involving six different *ugdot* designed to provoke and then destroy the Syrian forces in the Bekaa valley. The reason for this complexity was political. Simply put, most of the Israeli cabinet was willing to buy onto an invasion to destroy the Palestinian infrastructure in southwestern Lebanon and drive their artillery out of range of Israel--hence the original stated objective of advancing no more than 40 kms into Lebanon. However, Sharon, and to a certain extent Prime Minister Menachem Begin, had other ideas. Sharon and Begin hoped to completely reorder Lebanese society and create a stable polity dominated by the Maronites that would make peace with Israel. This required the expulsion of the Syrians and the conquest of Lebanon up to Beirut. Since the rest of the cabinet would not sanction an attack on the Syrians in the Bekaa or near Beirut, Sharon had to goad the Syrians into contesting the Israeli invasion so that he could persuade the cabinet that the Syrians were a threat to the IDF and had to be taken care of.<sup>159</sup>

To accomplish this subterfuge, Sharon planned to send a small *ugdah*, essentially a reinforced brigade of the regular army's 162nd Armored Division under Brig. General Menachem Einan north along the western slope of Mt. Lebanon to cut the Beirut-Damascus highway at Ayn Darah. This move would have two effects: first, it would cut off the Syrian forces in and around Beirut from the Bekaa and Syria itself, and second, it would threaten the western flank of the Syrian forces in the Bekaa. The Israelis were certain that once this force was in place, it would be so threatening that the Syrians would have to attack it. Once the Israelis had sufficient provocation, they would unleash their main assault. First, the Israelis planned to hurl about a dozen different ground and air systems against the Syrian SAM batteries in the Bekaa valley to free up the skies over Lebanon for the IAF and prevent the problems the Arab SAMs had created in 1973 from recurring. Then the Israeli army would crush the Syrian forces in the Bekaa.<sup>160</sup>

For this mission, the Israelis created a corps-sized formation--their first ever--called the Bekaa Forces Group (BFG). The BFG was commanded by Maj. General Avigdor Ben Gal, who had commanded the 7th Armored Brigade on the Golan in 1973. Ben Gal's force was centered on the 252nd Armored Division and the 90th Reserve Armored Division, as well as a slightly smaller armored *ugdah* called Vardi Force. In addition, Ben Gal had an *ugdah* of one paratrooper and one infantry brigade under Brig. General Yossi Peled equipped with large numbers of ATGMs and intended to serve as a

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<sup>159</sup> The best description (and the original revelations) of the machinations by Sharon and Begin and their influence on the development on Israeli military planning can be found in Schiff and Ya'ari, see esp. pp. 31-108.

<sup>160</sup> Dupuy and Martell, pp. 91-95; Gabriel, *Operation Peace for Galilee*, pp. 60-65; Wald, pp. 29-54.



tank-killing force in the event the Israelis hit significant Syrian armor concentrations. Finally, Ben Gal had the 880th Reserve Armored Division as a corps reserve. The BFG was to drive into the Bekaa in a three pronged assault forming a double-envelopment within another double envelopment. In the western Bekaa, Vardi force would drive west of Lake Qir'awn while the 90th Reserve Armored Division would swing around the eastern shore of the lake, enveloping the right (western) flank of the Syrian forces in the Bekaa. These forces would link up and then push on to the Beirut-Damascus highway where they would link up with the 252nd Armored Division, driving along the western slope of the anti-Lebanon range (the eastern border of the Bekaa), creating a second envelopment in which to trap the rest of the Syrian forces in the Bekaa. Peled's ugdah would hang back and wait for a large Syrian armored force to be identified, while the 880th would remain in corps reserve and serve as an exploitation force if necessary.<sup>161</sup>

### **The Course of Operations**

In the west, the Israeli offensive went largely according to plan, but not according to schedule. On 6 June 1982, the Israelis launched their attack only to quickly discover, as the Syrians had six years before, that Lebanon's terrain greatly impeded the movement of large armored forces. Israeli tank columns got jammed up trying to bypass the coastal cities and were further delayed by small groups of Palestinians with RPGs and mines who ambushed Israeli armor as it moved along the narrow roads. While these problems were reminiscent of those experienced by the Syrians in 1976 there were also important differences. First, the Israelis were never actually stopped by the Palestinian guerrillas and for the most part ambushes delayed them only hours rather than the days they had cost the Syrians. Second, although the Israelis also began the campaign leading with tanks improperly supported by infantry, within two or three days they had learned their lesson and began employing dismounted infantry and paratroopers to aggressively patrol and picket the hills overlooking the roads. Third, the Israelis relied heavily on combat engineers to improve the trafficability of the Lebanese roads wherever possible, and in some cases, to cut new paths around resistance or natural obstacles. Finally, Israeli forces still made remarkably good time by any standard, suggesting their original timetable was probably unrealistic given the terrain. The Israelis reached the outskirts of Beirut by 9 June where they encountered considerably stiffer resistance, but by 11 June they had fought their way into the suburbs and had besieged the center of the city.<sup>162</sup>

In the east, things moved in a more herky-jerky fashion, reflecting the bizarre political circumstances of the Israeli invasion, the ongoing mobilization of key units, and certain command failures on the part of key IDF officers. During the first three days of the invasion, Ben Gal's Bekaa Forces Group pushed into southeastern Lebanon to clear out the Palestinians in the area and get into position for the expected showdown with the Syrians. The 252nd Armored Division penetrated from the Golan heights and turned east with Mt. Hermon on its right. This division cleared out PLO forces from the foothills of Mt. Hermon, an area known as "Fatahland," with little resistance. The Israelis came under some desultory attacks by PLO antitank teams, but most of the Palestinian guerrillas fled without a fight, abandoning huge caches of arms and provisions. At this point, the 252nd Armored Division purposely refrained from approaching Syrian positions because the cabinet had not yet approved an attack on the Syrians, and of greater importance, the BFG was not fully deployed and ready for combat. Indeed, except for the 252nd Division, the rest of the BFG remained in Israel on 7 and 8 June because many of its units, especially the 880th Reserve Armored Division, had not fully mobilized yet. On the third day, 8 June, the Israeli General Staff finally ordered the BFG

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<sup>161</sup> Dupuy and Martell, pp. 91-95; Gabriel, *Operation Peace for Galilee*, pp. 60-65; Wald, pp. 29-54.

<sup>162</sup> Cordesman and Wagner, pp. 136-144; Davis, pp. 78-93; Dupuy and Martell, pp. 98-128; Gabriel, *Operation Peace for Galilee*, pp. 82-109; Schiff and Ya'ari, pp. 109-150, 181-194; Wald, pp. 29-35.

forward into their jumping off positions for the assault up the Bekaa, and Ben Gal's divisions hit the forward Syrian screening positions around Marjayoun. The Syrians put up very little resistance and were easily driven off.<sup>163</sup>

Syria was surprised by the Israeli invasion. Syrian forces in Lebanon were weak and unprepared for war with the IDF, and despite Tel Aviv's disingenuous assurances that its grievances were only with the PLO and that Israel had no desire to fight Syria, Damascus wasn't taking any chances. The Syrians ordered their troops in Lebanon to man defensive positions along many of the major routes from the south into their strongholds in the Bekaa and along the Beirut-Damascus highway. Syria ordered the 1st Armored Division to move to the Bekaa to bolster the forces already there. This division arrived on 7 June and immediately began to prepare defensive positions based on a typical Soviet defense-in-depth pattern. Damascus also began moving the 3rd Armored Division to Lebanon on 7 June, soon after the 1st Armored Division's move was completed and the roads were again free. Finally, Syria redeployed three more SAM batteries to the Bekaa, bringing the total number of medium SAM batteries there to nineteen. Nevertheless, Asad was still leery of unnecessarily provoking the Israelis, and refrained from moving forward in some places to occupy better defensive terrain for fear that this would appear aggressive to the notoriously paranoid Israelis. Overall, Asad's approach seemed to be one of cautious waiting: he would stay out of the Israelis' way to avoid war if at all possible, but reinforce his positions in Lebanon in the event the Israelis attacked anyway.<sup>164</sup>

#### *Operations in the Central Sector*

While the Syrians were attempting to decipher Israeli intentions, the understrength Israeli 162nd Armored Division was slowly moving into south-central Lebanon, making for the western side of the Lebanon range. This unit was supposed to dash north to reach the Beirut-Damascus highway 48 hours after the start of the attack. At first, its route of advance was largely undefended, as the Syrians had only one company of tanks and one commando company watching over it. However, the Israeli armor got badly jammed up along the narrow roads (less than 5 meters wide, in most places), and the Israeli commanders decided not to push ahead during the night. As a result, the force made little progress during the first two days of the invasion. The Syrians detected the movement of this force on 7 June and sent several small commando units to set up ambushes along their route in the Jizzin area to slow their advance. They also dispatched a brigade-sized task force of commandos and armor from the 85th Mechanized Brigade to establish a blocking position farther north at Ayn Zhaltah.<sup>165</sup>

On the third day, pressure from the Israeli General Staff prompted the 162nd Armored Division to pick up the pace of its advance. In the morning, the 162nd ran into several of the small ambushes established by the Syrians the day before. The Syrian commando teams, backed by armor, fought hard and retreated in good order when they were outflanked and driven off by the IDF. While they did little damage to the Israelis, they delayed them, which proved crucial later on. Later, the first Syrian helicopter gunships made their appearance, attacking the 162nd Division along the narrow, winding mountain paths. The Syrian helicopters--French-made Gazelles with HOT ATGMs--caused little damage and were easily driven off, but they so unnerved the Israelis that the

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<sup>163</sup> Cordesman and Wagner, pp. 138-139; Davis, pp. 83, 85-89; Dupuy and Martell, pp. 103-104; Gabriel, *Operation Peace for Galilee*, pp. 84-895; Sciff and Ya'ari, pp. 117-118, 151-152, ; Wald, pp. 41-44.

<sup>164</sup> Cordesman, *The Arab Israeli Military Balance*, p. 64; Cordesman and Wagner, p. 83; Schiff and Ya'ari, pp. 117-118, 155-156; Seale, *Asad*, p. 380; Wald, pp. 41-42.

<sup>165</sup> Cordesman and Wagner, pp. 138-139; Dupuy and Martell, pp. 110-112; Gabriel, *Operation Peace for Galilee*, p. 84; Schiff and Ya'ari, pp. 117, 159-160; Wald, pp. 35-37.

entire division scrambled for cover and took some time to get moving again.<sup>166</sup>

All of these skirmishes, plus additional delays caused by Israeli command problems, bought the Syrians time to establish a very impressive defense at Ayn Zhaltah. Even though the 162nd Division covered 50 kilometers through the mountains on 8 June, it wasn't enough. When the Israelis finally reached the town during the evening of 8 June, they were smashed by Syrian commandos, well dug-in and generously armed with RPGs and ATGMs and covered by tank and other heavy weapons fire. The Syrians had dug-in on the high ground on three sides around the southern entrance to the town, with their tanks at the far end. The Israelis saw the tanks and drove straight at them, destroying three T-62s before they were themselves caught in a crossfire by Syrian commandos with Saggars and RPGs hiding among the steep ridgelines on both sides of the road. The Syrians destroyed the two lead tanks and several APCs of the Israeli vanguard before the Israelis could halt the column and pull back from the Syrian "fire sack." Later, the Syrians beat back an Israeli infantry force that tried several times to rescue their wounded. Moreover, when the Israelis pulled back from the village to regroup, Syrian commandos crept forward and again attacked them from several different directions, forcing the Israelis to fight their way back south of the town. Late the next day, the Israelis regrouped and conducted a flanking attack under heavy air support that drove the Syrians from the hills overlooking the town, so that by nightfall on 9 June, Ayn Zhaltah was in their hands. The Syrians did only slight damage to the IDF in the clashes at Ayn Zhaltah, mostly because their fire was inaccurate and their armor refused to maneuver against the Israelis, but they prevented the 162nd Armored Division from cutting the Beirut-Damascus highway and outflanking the Syrian defense lines in the Bekaa. Ultimately, this was one of the most important factors in preventing the complete destruction of the Syrian army in Lebanon.<sup>167</sup>

Farther south on 8 June, an Israeli armored brigade without infantry or artillery support attacked a reinforced brigade of Syrians in the Lebanese town of Jizzin. Jizzin was important because it controlled the intersection of the main road running north-south along the western slope of the Lebanon range (the road the 162nd Armored Division was following) and the main east-west route from Sidon to the Bekaa. The Syrians saw Jizzin as the forwardmost position on the right flank of their defensive lines in the Bekaa and had sent a brigade task force to hold the city. The Israelis, had been content initially to set up a blocking position at the crossroads--thereby allowing the 162nd Armored Division to pass--but not attacking the Syrians in the town. On 8 June the Israelis attacked into the town, where they were met by well-placed anti-tank ambushes manned by Syrian commandos. The Israelis then sent another part of their brigade in a flanking maneuver to roll up the Syrian positions in the outlying hills. Because the Syrian commando units were deployed to fire into the town and could not quickly reorient themselves to deal with this unexpected move, it fell to the Syrian armor to try to stop the Israelis. However, the Syrian tanks also had difficulty reorienting themselves and the tank battalion was virtually wiped out, prompting the other Syrian units to pull back.<sup>168</sup>

The fighting between Syrian and Israeli units at Ayn Zhaltah and Jizzin, along with the movement of the Syrian reinforcements into the Bekaa, and the participation of a few Syrian MiGs in combat with IAF jets over Lebanon, were enough for Sharon to persuade the Israeli cabinet to approve the offensive against the Syrians. On the afternoon of 9 June, Ben Gal was ordered to drive the Syrian army out of the Bekaa.

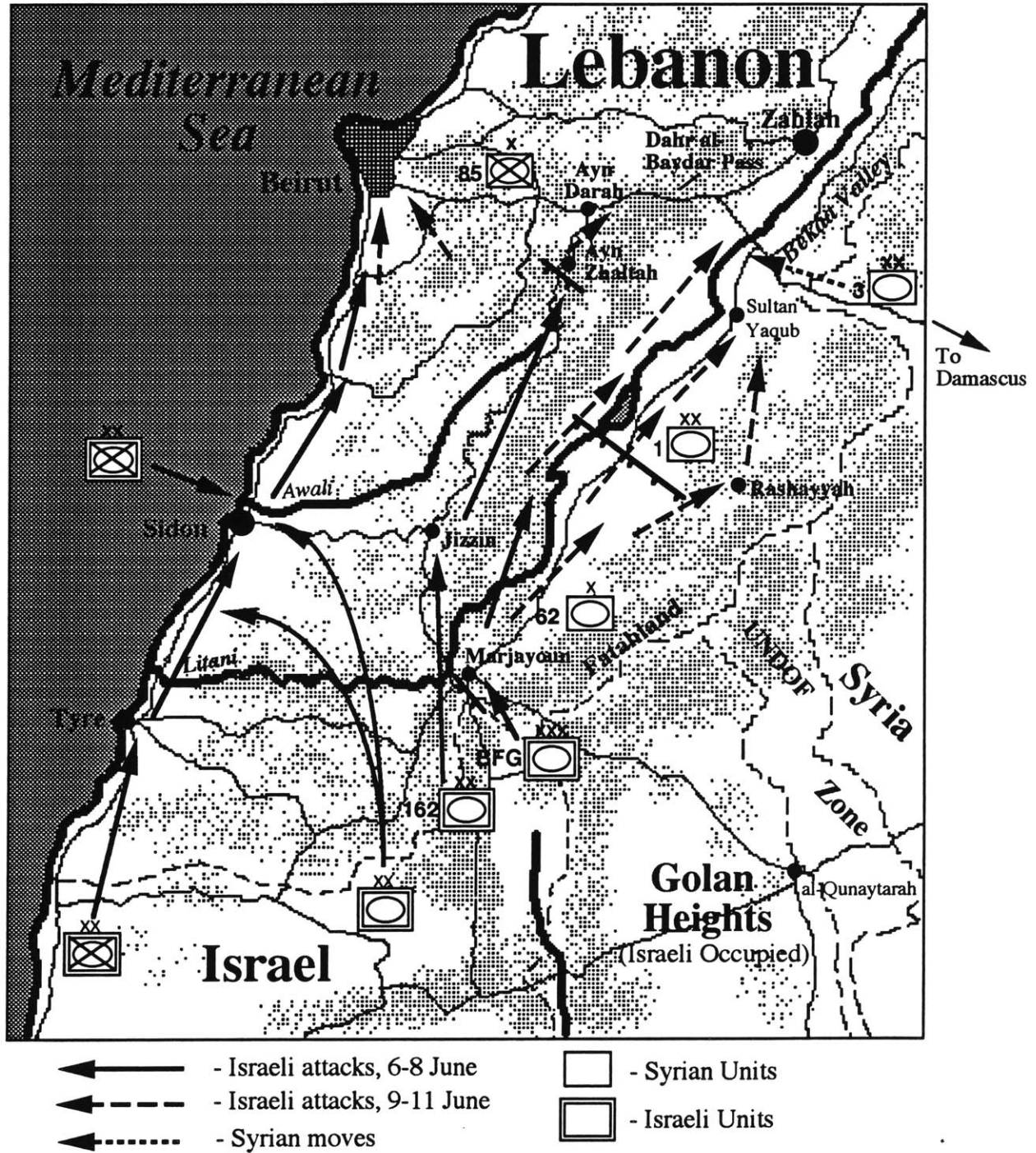
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<sup>166</sup> Cordesman and Wagner, p. 139; Dupuy and Martell, pp. 110-112; Schiff and Ya'ari, pp. 160-161; Wald, pp. 37-38.

<sup>167</sup> Cordesman and Wagner, p. 139; Dupuy and Martell, p. 112; Schiff and Ya'ari, pp. 161-162; Seale, *Asad*, p. 382; Francis Tusa, "Lebanon 1982: Israeli Hubris or Syrian Strength?" *Armed Forces*, Vol. 6, No. 9, Sept. 1987, p. 418; Wald, p. 38.

<sup>168</sup> Dupuy and Martell, pp. 115-116; Gabriel, *Operation Peace for Galilee*, p. 94; Schiff and Ya'ari, pp. 158-159; Tusa, p. 417; Wald, p. 44.

# The Israeli Invasion of Lebanon, June 1982



Simultaneously, the IAF was ordered to implement its long-planned contingency operation to knock out the Syrian SAM network in the Bekaa valley.<sup>169</sup>

### *The Israeli SAM Suppression Campaign*

Syria's air and air defense forces were decisively defeated by the Israeli air campaign. The Israelis had meticulously studied the lessons of the 1973 war and had developed a comprehensive operation involving over a dozen different ground and air-based systems to suppress and destroy Syria's medium range SAM units. Although the Syrians had bought considerably more SAMs from the USSR, and in some cases bought more advanced models of SAMs than they possessed in 1973, they had not kept pace with the development of Israeli SAM suppression techniques. Syrian SAM operations were highly predictable and patterned, allowing the Israelis to develop countermeasures relatively easily. Syrian command and control was primitive, slow, and lacked redundancy, making it susceptible to Israeli attack and incapable of adequately responding to the fast-paced multi-faceted Israeli assault. Syrian radars, transporter-erector-launchers (TELs), and support equipment never moved from their positions and Syrian radars were left on unnecessarily for long periods of time, making it easy for the Israelis to locate and target them. The Syrians also had inadequate early-warning radars--they had less than a quarter of the radars called for by Soviet doctrine--and did not recognize that terrain masking from Lebanon's mountains had considerably degraded the coverage of the radars they had deployed. All of these problems left them highly vulnerable to the Israeli attack.<sup>170</sup>

The Israelis began the assault with flights of unmanned drones and electronic spoofing of the Syrian radars to convince the Syrians that large numbers of attack aircraft were overhead. These deceptions prompted Syrian SAM crews to turn on their targeting radars and blow off a huge salvo of missiles at the drones, at which point the Israelis unleashed a swarm of air- and surface-launched anti-radiation missiles that homed in on the Syrian radars and destroyed them. With the Syrian SAM units blinded and "unloaded," Israeli strike aircraft and artillery attacked the early warning radars and TELs themselves, pounding them for several hours with highly accurate strikes. The Syrians mostly panicked during the attack, showing little ability to adapt and respond to this unexpected set of Israeli tactics. Some Syrian SAM crews tried to fight back as best they could, but few turned off their radars or tried to pack up and move, which were probably the best solutions to their problems. Syrian SAM batteries also had difficulty communicating with each other and with the small number of AAA units supposed to defend them, so that they could not put together a coordinated response to the Israeli attacks. By night on 9 June the Israelis had destroyed 17 of 19 Syrian SAM batteries in the Bekaa without losing a plane and by the end of August, subsequent Israeli airstrikes destroyed another 12 SAM batteries.<sup>171</sup>

When Damascus became aware of the destruction being inflicted on its SAM batteries, it ordered the Syrian Air Force to come to the aid of the air defense forces. The Syrians dispatched 70-100 aircraft which were met by an equal number of Israeli fighters. The Syrians labored under several disadvantages. Syrian command and control was incapable of coordinating the operations of air forces and ground-based air defense units so that these forces could only act either at different times or in different areas, but

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<sup>169</sup> Dupuy and Martell, pp. 114, 117; Schiff and Ya'ari, pp. 162-166.

<sup>170</sup> Seth Carus, "Military Lessons of the 1982 Israel-Syria Conflict," in Robert Harkavy and Stephanie Neuman, *The Lessons of Recent Wars in the Third World, Vol. 1*, (Lexington, MA: Lexington Books, 1986), p. 266; Cordesman and Wagner, pp. 159, 187; Katz, p. 293.

<sup>171</sup> Cohen, pp. 466-472; Cordesman and Wagner, pp. 186-193; Dupuy and Martell, pp. 119-121; Gabriel, *Operation Peace for Galilee*, pp. 97-99; Katz, p. 293; Benjamin S. Lambeth, *Moscow's Lessons from the 1982 Lebanon Air War*, RAND Report R-3000-AF, (Santa Monica, CA: RAND, Sept. 1984), esp. pp. 7-11; Schiff and Ya'ari, pp. 166-167; Tusa, pp. 418-419; Yonay, p. 358.

could not integrate their efforts. Damascus also had no particular battle plan or operational concept for employing its fighters--they were simply sent to the Bekaa and told to drive off the IAF without much thought to devising a strategy. The Syrians were flying MiG-23s and MiG-21s and their pilots were heavily dependent on guidance from ground controlled intercept (GCI) sites, while the Israelis flew F-15s and F-16s armed with far more capable air-to-air missiles than the Syrians possessed. The Israeli fighters also were supported by E-2C Hawkeye airborne warning and control aircraft, which proved highly useful in monitoring Syrian air operations and vectoring Israeli aircraft to intercept Syrian planes before they could sneak up on Israeli aircraft or flee the battlefield.<sup>172</sup>

Syria's technological disadvantage had some impact on combat, but became almost beside the point because Syrian pilot performance was so poor. When the Syrian Air Force rose to defend the SAMs, the Israelis began a comprehensive electronic jamming campaign that severed the communications links between the Syrian interceptors and their GCI sites. Deprived of GCI guidance, the Syrians pilots "went stupid." Syrian formations immediately dissolved as their pilots could not handle flying in formations larger than pairs. The Syrians were completely unimaginative and showed no creativity or flare for improvisation; they flew into combat mindlessly, making little or no effort to maneuver in dogfights with the Israelis. Some pilots simply flew figure-eights because without the orders of their GCI operators they literally had no idea what to do and made no effort to try to think for themselves. Those few pilots who did try at least some air combat maneuvers employed only simple, highly predictable tactics and were slow to react to Israeli moves. The result was almost inevitable as 29 MiGs were shot down without killing a single IAF fighter. On 10 and 11 October the same performance was repeated as Syria again sent up large numbers of aircraft to try to provide air cover for the Syrian ground forces now that their SAM defenses had been destroyed. On the 10th the Syrians lost 35 aircraft and on the 11th another 18 aircraft (in only half a day of combat), all without shooting down any Israeli planes. By the end of September the Syrians still had not shot down a single Israeli plane while losing 86 MiGs to the IAF.<sup>173</sup>

The performance of Syria's Air Force was both hopelessly inept and yet incredibly brave. A senior Israeli Air Force officer asked to comment on the performance of the MiG-23 replied:

I can't compare it when a MiG-23 is flown in a tactic that I can't understand or in a situation that I would never get into. The problem is that their pilots didn't do things at the right time or in the right place . . . the pilots behaved as if they knew they were going to be shot down and then waited for it to happen and not how to prevent it or how to shoot us down. Which was very strange because in the 1973 War the Syrians fought very aggressively. It wasn't the equipment at fault, but their tactics. They could have flown the best fighter in the world, but if they flew it the way they were flying we would have shot them down in exactly the same way. I don't mean they were sitting ducks, but in our view, they acted without tactical sense.<sup>174</sup>

One US military expert concluded:

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<sup>172</sup> Cohen, pp. 465- 468; Cordesman and Wagner, pp. 187, 194-197; Gabriel, *Operation Peace for Galilee*, pp. 97-100.

<sup>173</sup> Cohen, pp. 465-472; Cordesman and Wagner, pp. 144,197-203; Hirsh Goodman and W. Seth Carus, *The Future Battlefield and the Arab-Israeli Conflict*, (New Brunswick: Transaction Publishers, 1990), p. 26; Lambeth, esp. pp. 7-11; Seale, *Asad*, p. 381; Tusa, pp. 418-419; Yonay, p. 358.

<sup>174</sup> Quoted in Cordesman and Wagner, p. 197.

The Syrians were simply outflown and outfought by vastly superior Israeli opponents. Without question, its sophisticated American hardware figured prominently in helping Israel emerge from the Bekaa Valley fighting with a perfect score. nevertheless, the outcome would most likely have been heavily weighted in Israel's favor even had the equipment available to each side been reversed. At bottom, the Syrians were not done in by the AIM-9L's expanded launch envelope, the F-15's radar, or any combination of Israeli technical assets, but by the IDF's constant retention of the operational initiative and its clear advantages in leadership, organization, tactical adroitness, and adaptability.<sup>175</sup>

However, by the same token, one Israeli pilot who fought in the June air battles stated that the Syrians, "knew they stood no chance against us, yet they kept coming in and coming in as if asking to be shot down. They showed such remarkable dedication and courage, and I have nothing but respect and admiration for them."<sup>176</sup>

### *The Battle of the Bekaa Valley*

When the Israelis finally launched their ground attack in the east, the Syrians were fairly well prepared for it. The 1st Armored Division, reinforced with additional artillery and commando units, was fully deployed in the valley and had been preparing defensive positions for over two days. The Syrians deployed with their 76th and 91st Armored Brigades forward, dug-in across the valley floor and anchoring their lines in the mountains on either side. In addition, the Syrians were counting on the natural obstacle of Lake Qir'awn in the western Bekaa to help their defense, and had attempted to work this natural obstacle into their defensive scheme. The 1st Armored Division's mechanized brigade, the 58th, was deployed in depth, dug-in behind the two forward armored units where it could serve either as secondary line of defense, or a reserve that could be brought forward to aid the armored brigades. The Syrians also deployed teams of commandos backed with armor in anti-tank ambushes farther south to delay, disrupt, and attrite the Israeli forces before they hit the main defense line. Meanwhile, the T-72-equipped 3rd Armored Division was en route to the Bekaa and was expected to arrive some time on 11 June.<sup>177</sup>

During the afternoon of 9 June, while the IAF was slaughtering Syria's air and air defense forces, the Israeli Bekaa Forces Group slogged their way along the narrow roads of the southern entrance to the valley. On a number of occasions, Syrian helicopter gunships--and occasionally airstrikes--attacked the Israeli columns, causing little damage but forcing them to take cover and slowing their advance. In addition, the Israelis constantly encountered Syrian commando ambushes which further slowed and frustrated them. The Syrian commandos were usually quite well-deployed and very tough to root out. Several Israeli units lost armored vehicles and men to these ambushes, while all were slowed by the need to move cautiously and clear out the stubborn Syrian defenders whenever they did trip an ambush. The Israelis had learned to use infantry, airstrikes, and armor when possible, to clear the surrounding hills whenever they encountered dug-in Syrian anti-tank teams, but this was a time-consuming process and the Syrians fought hard and mostly retreated in good order when their positions became untenable. Nevertheless, Syrian aim was poor and the commandos and their armor rarely tried to get out and maneuver against the Israelis. These problems, and the superb gunnery and quick improvisational skills of the Israelis, tended to minimize the actual damage the Syrian commandos were able to inflict, but the loss of time was an important factor. This was especially so since Israel knew that the destruction of the Syrian SAMs would 'bring

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<sup>175</sup> Lambeth, p. 31.

<sup>176</sup> Quoted in Seale, *Asad*, p. 381.

<sup>177</sup> Dupuy and Martell, p. 123;



immense superpower pressure on them to agree to a ceasefire.<sup>178</sup>

The Israelis finally attacked the main Syrian defense line in the early morning of 10 June. The Syrians were outnumbered by the Israelis in the assault: the Syrian 1st Armored Division had 400 tanks, 150 artillery pieces and approximately 150 ATGM-equipped BRDM-2s, while the Israeli ugdot leading the attack had over 650 tanks and about 200 artillery pieces. However, the Syrians had the advantages of their dug-in defenses and the superb defensive terrain of the Bekaa. As planned, two of the Israeli ugdot--the Vardi force and the 90th Reserve Armored Division--struck the Syrian lines on either side of Lake Qir'awn, while the 252nd Armored Division hit the eastern flank of the Syrian lines anchored on the Anti-Lebanon range. Although all three Israeli attacks were frontal assaults into Syrian units entrenched in excellent defensive terrain which prevented the Israelis from deploying more than a fraction of their forces, the Israelis broke through along all three axes. In the far west, the Syrians deployed only light covering forces, believing the terrain too rough for an Israeli armored drive, with the result that the Vardi force quickly broke through the Syrian lines and began driving far north into the Bekaa along the eastern slope of the Lebanon range. The main battle, however, took place to the east of Lake Qir'awn where the Israeli 90th Armored Division attacked up the main north-south road in the Bekaa. The Syrians recognized this as a critical threat and fed in ever more reserves to try to stop the Israelis. Although the terrain prevented the Israelis from deploying their full force and the Syrians were well entrenched in the surrounding hills, the Israelis constantly worked against the Syrian flanks and used their gunnery skills to pick off Syrian armored vehicles and grind down the Syrian forces. By 1500 hours, the Syrian lines had buckled and the 90th Division had broken through. In the east, the Israeli 252nd Armored Division, spearheaded by the elite 7th Armored Brigade, drove through the Syrian lines fairly easily and by late afternoon they were threatening to link up with the 90th Division and encircle the remnants of the forward brigades of the Syrian 1st Armored Division.<sup>179</sup>

Yet the trap never snapped shut, and much of the 1st Armored Division was able to escape as a result of Israeli mistakes and Syrian successes. Of greatest importance, most of the Israeli units did not aggressively pursue the retreating Syrians and moved at an almost leisurely pace. Despite the extreme urgency in Tel Aviv for the BFG to reach the Beirut-Damascus highway before nightfall, Ben Gal's units moved slowly and deliberately. The Syrians for their part retreated well, conducting fighting withdrawals all across the front and maintaining good unit cohesion, except among those formations that had suffered most in the combat with the Israelis earlier in the day. On at least one occasion, a Syrian commando unit conducted a spoiling attack against an Israeli armored unit near Rashayyah which only destroyed one APC and killed a few soldiers, but still disrupted the Israeli formation and side-tracked its advance. In addition, the Syrians threw their helicopter gunships into the fray to slow down the Israelis and cover the retreat of their ground forces. The Syrian Gazelles and Mi-24 Hinds generally caused only minor damage to the Israelis, but they did slow down the already cautious advance. For the most part, the slow pace of the Israeli pursuit appears to have been the product of their experience over the previous four days, during which they had been constantly ambushed by Syrian commandos. This seems to have made the IDF reticent to engage in any sort of headlong advance through the Lebanese mountains, even after cracking the main Syrian lines and putting the 1st Armored Division to flight.<sup>180</sup>

This caution was further reinforced when an Israeli battalion accidentally ran into

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<sup>178</sup> Cordesman and Wagner, p. 142; Dupuy and Martell, p. 121; Gabriel, *Operation Peace for Galilee*, p. 100; Schiff and Ya'ari, pp. 165-166, 168-170; Tusa, p. 418; Wald, pp. 45-46.

<sup>179</sup> Cordesman and Wagner, pp. 143, 150; Davis, p. 93; Dupuy and Martell, pp. 123-124; Gabriel, *Operation Peace for Galilee*, pp. 102-105; Schiff and Ya'ari, pp. 171-179; Wald, pp. 46-54.

<sup>180</sup> Cordesman and Wagner, p. 143; Davis, p. 93; Dupuy and Martell, pp. 123-124; Gabriel, *Operation Peace for Galilee*, pp. 102-105; Schiff and Ya'ari, pp. 171-179; Wald, pp. 46-54.



several battalions of the Syrian 58th Mechanized Brigade, plus other elements of the 1st Armored Division regrouping around the town of Sultan Yaqub during the afternoon of 10 June. Most of the Syrian units were part of the Syrian second line of defense and none of them appear to have realized that the Israelis had gotten so far north. The lead battalion of an Israeli armored brigade pushed into the town against no resistance and then out the other side only to suddenly find itself in the midst of the Syrian deployment. The Syrians apparently did not realize what had happened for some time, probably assuming the Israeli armor was other Syrian units retreating back from the earlier battles. When they did figure out that there was an Israeli battalion in their midst they were very tentative in engaging the IDF force, perhaps in response to the devastation of their armor earlier in the day. As the afternoon wore on, however, the Syrians realized that the Israelis were trapped and outnumbered and began to attack them more aggressively.

Although the firefights became quite fierce and the Syrians had the advantage of being deployed in hills surrounding the Israelis on three sides, they did remarkably little damage to the trapped Israelis. The Syrian armor and APCs remained in the hills and were content to fire down on the Israelis, rather than actually coming down and destroying the Israeli armor in a close assault. Twice, the Syrians sent small anti-tank units down to attack the Israelis, but they were driven off by automatic weapons fire. Finally, at around 2100, the Israelis concentrated virtually every artillery piece in the Bekaa on the Syrians around Sultan Yaqub, creating a "box" of fire through which the Israeli battalion was able to withdraw. The Israelis lost only 6-8 tanks at Sultan Yaqub, but the ambush had completely preoccupied Ben Gal's command staff, deprived the rest of his corps of artillery support, and heightened the general Israeli concern over Syrian ambushes. Thus, by night on 10 June, the Israelis had routed the 1st Armored Division, but they had not finished it off, nor had they reached the Beirut-Damascus highway.<sup>181</sup>

Despite the IDF's problems on 10 June, the defeat of the 1st Armored Division, coming on top of the destruction of the Syrian air and air defense forces, seems to have again thrown the Syrian high command into a state of panic. The Syrians correctly recognized that the Israelis had powerful forces threatening to cut the Beirut-Damascus highway, which would split the Syrian forces in Lebanon. The General Staff also could not be certain that the Israelis did not intend to drive up to the Beirut-Damascus highway, turn right and push into the Damascus plain in conjunction with an assault from the Golan. This fear prompted the Syrians to alert their forces around the capital, dispatch two independent armored brigades to block the Beirut-Damascus highway as it debouched into Syria, and order the 3rd Armored Division into the Bekaa to reestablish a defensive line there south of the Beirut-Damascus highway with the remnants of the 1st Armored Division.<sup>182</sup>

Although one of its brigades suffered heavy losses to IAF airstrikes on 10 and 11 June, by 1000 hours on 11 June the 3rd Armored Division was in the Bekaa and heading south to take up defensive lines forward of the Beirut-Damascus highway before the Israelis could get there. The Israelis meanwhile had finally gotten going after a late start and were similarly racing north to get to the Beirut-Damascus highway before noon when a US-brokered ceasefire was due to take effect. Shortly before noon, lead elements of the 82nd Armored Brigade of the 3rd Armored Division collided with the vanguard of the Israeli corps. In the ensuing firefight, the Israelis quickly gained the upper hand through superior marksmanship and destroyed at least nine, and possibly as many as thirty, of the Syrian T-72s before the Syrians pulled back.<sup>183</sup> The Syrians were unable to knock out

<sup>181</sup> Cordesman and Wagner, p. 143; Davis, p. 93; Dupuy and Martell, pp. 123-124; Gabriel, *Operation Peace for Galilee*, pp. 102-105; Schiff and Ya'ari, pp. 171-179; Wald, pp. 46-54.

<sup>182</sup> Cordesman and Wagner, p. 43; Davis, p. 93; Dupuy and Martell, pp. 127-128; Gabriel, *Operation Peace for Galilee*, pp. 105-107; Schiff and Ya'ari, pp. 179-180; Wald, pp. 47-54.

<sup>183</sup> There is some confusion as to the number of Syrian T-72s destroyed in this clash. Cordesman and Wagner, and Dupuy and Martell, state that Israeli Merkava tanks destroyed 9 of the T-72s. However, other

any of the Israeli-designed Merkava tanks in this exchange. Nevertheless, the fight was still a sort of victory for Syria because the 3rd Armored Division had prevented the Israelis from reaching the Beirut-Damascus highway before the noon deadline.<sup>184</sup>

#### *The Israeli Offensive Along the Beirut-Damascus highway*

The last real combat involving sizable Syrian formations occurred on the Beirut-Damascus highway east of Beirut, in the Ayn Darah area on 22-25 June. The Israelis had been sitting on the outskirts of Beirut for two weeks and were trying to draw their noose tighter around the city to impose a real siege. However, their failure to cut the Beirut-Damascus highway in the initial invasion had left that major artery open, and Damascus had gone so far as to deploy additional commandos and some mechanized infantry to the eastern suburbs of Beirut to keep this axis open. The IDF decided to mount a drive eastward from Beirut along the Beirut-Damascus highway, supported by a drive from Ayn Darah north to the Beirut-Damascus highway--where the Israeli 162nd Armored Division had been stopped 12 days before. These forces would link up and then continue east to block the pass over the Lebanon range. The Syrians had two reinforced heavy brigades in the area, the 85th and the 62nd, with about 150 tanks left between them. The Israelis brought in elite infantry from the Golani Brigade and paratrooper units supported by armor and the entire IAF. The Syrians were overwhelmed by the Israelis, as the IDF infantry deftly cleared their anti-tank ambushes and Israeli armor finally found some room to maneuver against the Syrian tanks. Syrian units could muster little resistance, and some began to collapse and flee. The Israelis took large numbers of prisoners and even began capturing tanks abandoned by their crews. Damascus reacted by quickly assembling a force of commandos and armor in the Bekaa and sending them west along the Beirut-Damascus highway to set up a blocking position at the Dahr al-Baydar pass. This force rebuffed the initial Israeli probes, at which point Tel Aviv decided it was content with its gains and a further advance was unnecessary. Another ceasefire came into effect on 25 June.<sup>185</sup>

The Syrian armed forces had been defeated in Lebanon, in some ways quite badly, but the campaign had not been a complete fiasco. In particular, the Syrians had prevented the Israelis from driving them out of the Bekaa and thereby eliminating them as a factor in Lebanese politics. While Syrian units had been regularly defeated in battle, their ground forces had stuck together and retreated in good order, allowing them to salvage far more than would otherwise have been the case. In the end, the Syrians lost 1,200 dead, 3,000 wounded, and 296 prisoners in addition to 300-350 tanks, 150 APCs, nearly 100 artillery pieces, 12 helicopters, 86 aircraft, and 29 SA-2/3/6/8 batteries destroyed. Against the Syrians on 6-25 June, the Israelis suffered 195 killed and 872 wounded, in addition to 30 tanks lost (with another 100 damaged) and 175 APCs destroyed and damaged.<sup>186</sup>

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sources (Davis) make it clear that the Syrians were fighting Peled's tank-killing *ugdah* and most of the Syrian tank losses were actually to Israeli ATGMs, not to the Merkavas. This seems to support Tusa's claim that the Israelis destroyed 30 T-72s in this firefight. (Tusa, p. 419.) Tusa sides heavily with the Syrians in most debates, suggesting that this figure is not an Israeli exaggeration. Gabriel confuses the issue further by claiming that the Syrians only lost 9 T-72s to Israeli ATGMs and the Merkavas did not destroy any. (Gabriel, *Operation Peace for Galilee*, p. 105) Gabriel's account is almost certainly inaccurate.

<sup>184</sup> Davis, p. 93; Dupuy and Martell, pp. 127-128; Gabriel, *Operation Peace for Galilee*, pp. 105-107; SMoreaux, p. 28; Chiff and Ya'ari, pp. 179-180; Wald, pp. 47-54.

<sup>185</sup> Cordesman and Wagner, pp. 144-146; Davis, pp. 97-99; Dupuy and Martell, pp. 138-Gabriel, *Operation Peace for Galilee*, pp. 109-112; Schiff and Ya'ari, pp. 204-205;

<sup>186</sup> Cordesman and Wagner, pp. 150, 153; Dupuy and Martell, p. 140; Gabriel, *Operation Peace for Galilee*, pp. 120-121; Moreaux, March 1986, p. 28; Seale, *Asad*, p. 394; Tusa, p. 419. Please note that the Israeli casualty estimates are those of Cordesman and Wagner, which strike me as pretty accurate. All

## **General Observations on Syrian Military Effectiveness During the Israeli Invasion of Lebanon**

In some respects, Syrian combat performance in Lebanon showed considerable improvement over past wars, while in other ways it showed no improvement whatsoever. Richard Gabriel has asserted that Syrian performance in Lebanon was the best of any Arab army the Israelis had ever fought. Moreover, Gabriel's remarks echo the opinion of many IDF personnel. By contrast, Trevor Dupuy and Paul Martell argue that given the advantage of defending the superb terrain of Lebanon, the Syrians should have done much better, and probably performed worse than they had in 1973. Similarly, Cordesman and Wagner conclude that the Syrians only *seemed* more capable to the Israelis because the IDF was constantly hamstrung by the constraining political environment Sharon had created and by command failures among the IDF units in Lebanon. To some extent, all of these assessments are probably correct.<sup>187</sup>

### *Strategic Performance*

Given the conditions under which they were forced to operate, Syrian generalship was adequate, but not brilliant. Initially of course, Syria believed Israeli propaganda about not wanting war with Syria, which greatly restricted their efforts. Syrian moves in the first few days of the war were wise given their desire to avoid provoking Israel while preventing the IDF from securing a decisive advantage and then attacking the Syrian forces in Lebanon. Syrian units were placed on alert from the start and ordered to begin preparing (and in some cases repairing) defensive positions along key axes of advance right away. Damascus bolstered its air defenses in the Bekaa and began redeploying two of its armored divisions to reinforce the ground units in Lebanon, many of which had been on occupation duties for so long that they were not combat ready. When the Israelis began pushing up the spine of the Lebanon range toward the Beirut-Damascus highway, the Syrians recognized the danger of this move and decided to block it, regardless of the potential for provoking a war with Israel. This too was probably the right move: as bad as the fighting in the Bekaa actually went for Syria it almost certainly would have been worse had the Israelis been able to move their 162nd Armored Division to the Beirut-Damascus highway and then attack into the Bekaa from that position, behind the main Syrian defense lines.

Syria's strategy for fighting the Israelis once it became clear that war was unavoidable also was a reasonable approach. The Syrians deployed their commandos forward with armor support in ambushes along the narrow defiles the Israelis had to follow into the Bekaa. Here they were ideally placed to disrupt, delay, and perhaps even block the Israeli advance. Deploying all of the commandos with the reinforced 1st Armored Division along the main Syrian defense lines in the Bekaa would not have taken full advantage of the commandos' capabilities and their impact would have been much reduced. The Syrian defense strategy in the Bekaa was very straightforward--a standard, Soviet-style defense-in-depth with two brigades up and one brigade back--but still an entirely appropriate response to the situation. It may be the case that a truly brilliant general might have found a better approach, perhaps drawing the Israelis in and trapping them in an operational level "kill zone," or giving up the valley floor to the Israelis only to fall on them in a flanking counterattack out of the mountains on either side. However, the Syrian strategy was not bad and it is unclear that Syrian tactical forces could have implemented a more sophisticated defensive scheme. For instance, any strategy that relied heavily on large scale flanking attacks would have given up the enormous

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other casualty figures for Israel fail to distinguish between losses in combat with Syrians as opposed to losses suffered in combat with the Palestinians.

<sup>187</sup> Cordesman and Wagner, esp. pp. 151-152; Dupuy and Martell, pp. 218-226; Gabriel, *Operation Peace for Galilee*, p. 119.

advantage of the terrain and handed it to the Israelis. Given the drubbing the Syrians took in tank duels when they had the terrain advantage, it seems likely that such a counteroffensive strategy would have failed miserably.

Finally, while the decision to commit the Syrian Air Force to defend the SAMs and the ground forces in the Bekaa valley resulted in the destruction of almost one-quarter of the Syrian Air Force, it too was probably the best move. First, not sending out the Air Force to confront the Israelis probably would have been a severe blow to morale throughout the Syrian armed forces. The Air Force would have felt worthless, while the ground and air defense forces would have felt abandoned. In military terms, the Syrian Air Force succeeded in keeping much of the Israeli Air Force occupied on 9-10 June, the key days of the battle. The IAF was so intent upon killing Syrian MiGs that they concentrated most of their effort on the air battles. As a result, the IAF did not provide very much close air support to Israeli armor in the Bekaa until late on 10 June when the Syrian lines had already been broken. Before then, those Israeli aircraft assigned to ground attack missions had mostly been aiding the stalled drive around Ayn Zhaltah and flying BAI missions against the Syrian reinforcements moving toward the Bekaa. Israeli units fighting in the Bekaa generally had to rely on Tel Aviv's small number of attack helicopters to provide fire support when needed because the Air Force was busy elsewhere.<sup>188</sup> Indeed, Schiff and Ya'ari comment that the IAF provided only "occasional support" during the critical assault by the Israeli 90th Armored Division east of Lake Qir'awn.<sup>189</sup>

There were problems at the strategic level, but they were not necessarily problems of generalship. For example, Syrian military intelligence performed dismally. Syrian military intelligence failed to predict the Israeli invasion, nor did they appreciate Israeli objectives toward the Syrian forces in Lebanon. At a more technical level, Damascus' intelligence services completely dropped the ball with regard to the development of Israeli military forces and operations. The Syrians were entirely unaware of some of the systems the Israelis employed to destroy the SAM systems in the Bekaa valley, nor did they even foresee that the Israelis would make a major effort to neutralize Syria's ground-based air defenses.<sup>190</sup>

### *Tactical Performance*

The real variations in Syrian military effectiveness were at the tactical level. Specifically, there was a very considerable gap between the performance of Syrian commandos and that of the rest of the armed forces. Syria's commando forces consistently performed markedly better than any other units of the Syrian military. Syrian commandos chose excellent ambush sites and generally established very clever traps to lure the Israelis into prepared kill zones. The commandos showed a good ability to operate in conjunction with tanks and other armored vehicles, integrating them into their own fire schemes and doing a good job protecting the tanks from Israeli infantry. The Syrian commandos also were noticeably more aggressive, creative, and willing to take initiative and to seize fleeting opportunities than other Syrian units. Their surprise counterattacks on Israeli armored columns at Ayn Zhaltah and Rashayyah in the Bekaa stand out in particular. Finally, the Syrian commandos did an excellent job disengaging whenever the Israelis began to gain the upper hand in a fight, at which point they usually pulled back to another ambush site farther up the road.

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<sup>188</sup> Cordesman and Wagner, pp. 203-206; Dupuy and Martell, pp. 115-128, 144-146.

<sup>189</sup> Schiff and Ya'ari, p. 172.

<sup>190</sup> W. Seth Carus, "The Bekaa Valley Campaign," *The Washington Quarterly*, Autumn 1982, pp. 39-40; Cordesman and Wagner, pp. 83, 156; Cordesman, *The Arab Israeli Military Balance*, p. 64; Schiff and Ya'ari, pp. 117-118, 155-156; Seale, *Asad*, p. 380; Wald, pp. 41-42.

By contrast, the rest of Syria's armed forces performed very poorly, manifesting all of the same problems that had plagued them in their previous wars. Without a doubt, the Syrian Air Force performed worst of all the services, but having discussed their problems in some detail above, I will concentrate on the Syrian Army. In particular, the contrast between the Syrian commandos and their armored forces is striking.

As opposed to the competent performance turned in by their commandos, Syria's heavy formations had little to brag about other than their stubborn resistance and orderly retreat. Syrian armor consistently refused to maneuver against the Israelis, with the result that in every tank duel, no matter how much the terrain favored the Syrians, it was only a matter of time before the Israelis' superior marksmanship and constant efforts to maneuver for advantage led to a Syrian defeat. Chaim Herzog remarked that the Syrian military's greatest problem was its chronic "inflexibility in maneuver."<sup>191</sup> Syrian artillery support was very poor and had little effect on the fighting. Syrian artillery batteries showed almost no ability to shift fire in response to changing tactical situations or to coordinate fire from geographically dispersed units. Syrian armored and mechanized formations showed an understanding of the need to conduct combined arms operations, but little understanding of how to actually do so. Infantry, armor, and artillery all failed to provide each other with adequate support, allowing the Israelis--who also often failed to integrate the various combat arms into combined arms teams--to defeat each in detail. In general, the Syrians relied on mass to compensate for their tactical shortcomings, but Israeli tactical skill proved so overwhelming that even where Syrian armored and mechanized formations were able to create very favorable odds ratios as a result of the terrain or other circumstances, they were still easily defeated by the Israelis.<sup>192</sup>

Damascus' ground forces had other problems as well. Syrian units were extremely negligent in gathering information and conducting reconnaissance. Many Syrian commanders simply failed to order patrols to keep abreast of Israeli movements in their sector, instead relying on information passed down from higher echelons. Those patrols that were dispatched seemed to have little feel for the purpose of reconnaissance and rarely gathered much valuable information. As a result, many Syrian units blundered around Lebanon with little understanding of where the Israelis were, sometimes with fatal consequences. Syrian units showed very poor fire discipline, squandering ammunition so quickly that they were forced to retreat on occasion because they were out of ammunition. Despite extensive training in night-combat, Syrian units were almost helpless after dark. According to their Soviet advisers, Syrian personnel at all levels could not night navigate, their units lost all cohesion in the darkness, and morale dropped accordingly. Only some of the commando units showed any ability to actually apply the training they had received and operate after dark, and fortunately for the Syrians, the Israelis generally did not continue their advance at night.<sup>193</sup>

The Syrian Gazelle helicopter gunships made a huge psychological impact on the Israelis, but did little physical damage. The Gazelles were not able to manage more than a few armor kills during the war, and although they employed good Western-style "pop-up" tactics, they could only delay the Israelis. While this was useful both in slowing the Israeli advance to the Bekaa and then hindering the Israeli pursuit after they had broken through the Syrian lines, the Gazelles were unable to prevent Syrian defeats, even when they were committed in large numbers as in the fighting around Lake Qir'awn.<sup>194</sup> Anthony Cordesman has commented that Syrian helicopter operations in Lebanon

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<sup>191</sup> Herzog, *The Arab-Israeli Wars*, p. 357.

<sup>192</sup> Cordesman and Wagner, pp. 165-176, 179-182; Major Richard Gabriel, US Army Reserve, "Lessons of War: The IDF in Lebanon," *Military Review*, August 1984, pp. 57-59; John Laffin, *The War of Desperation*, (London: Osprey, 1985), pp. 118-121; Moreaux, March 1986, p. 28.

<sup>193</sup> Cordesman and Wagner, pp. 120, 211-212; Laffin, pp. 118-121; Tusa, p. 419.

<sup>194</sup> Cordesman and Wagner, pp. 211-212; Laffin, pp. 118-121; Tusa, p. 419.

suffered from "The same tactical and operational rigidities, training, and command problems that affected its tank, other armor, and artillery performance."<sup>195</sup>

Syrian combat support was another impediment to their tactical performance. In particular, Syrian logistics was appallingly bad. Damascus had established huge stockpiles of spares and combat consumables in the Bekaa, yet during the course of the fighting many Syrian units experienced difficulties in getting resupply (although part of the problem was their wasteful expenditure of ammunition). Graft had riddled the Syrian quartermaster corps with the result that a lot of things that were supposed to have been available were not. In addition, the Soviets reported that the Syrians did not understand the Soviet-style "push" logistics system, with quartermasters demanding formal requests for provisions, rather than simply sending supplies to the front at regular intervals as intended.<sup>196</sup> Maintenance was another problem area for the Syrians. Most Syrian soldiers were completely incapable and unwilling to perform even basic preventive maintenance on their weapons and vehicles. Instead, these functions had to be performed by specialized technicians attached at brigade and division level, while for anything but the most minor repairs, equipment had to be sent back to a small number of central depots around Damascus. These facilities were manned in part by Cuban technicians who had to handle the more advanced Soviet weaponry. The Israelis reported capturing a fair number of Syrian armored vehicles abandoned because of extremely minor mechanical problems.<sup>197</sup>

The fact that Syria's commandos performed so much better than Syrian units ever had in the past should not obscure the fact that, in an absolute sense, when compared to the forces of other armies, Syria's commando battalions were still mediocre. In general, the Syrian commandos were content to sit in their prepared positions, fire down on Israeli forces that wandered into their ambushes, and then retreat as soon as the Israelis recovered and began to bust up the Syrian defensive scheme. Incidents such as the commando counterattacks at Ayn Zhaltah, Rashayyah, and a few other minor engagements were still exceptions to the rule. They are noteworthy because they were among the only times that even the commandos tried to go out and aggressively upset Israeli operations. The rule, however, was for the commandos to establish good ambushes and then wait passively while the Israelis moved into them. The commandos also weren't terrific with their weapons: on any number of occasions Israeli units were completely trapped by Syrian commando ambushes, subjected to a hail of gunfire, grenades, and missiles and emerged having suffered only a handful of casualties.<sup>198</sup> In addition, the commandos too frequently neglected to cover their flanks or were too quick to conclude that terrain was impassable. As a result, many Syrian ambushes were cleared by Israeli flankguards or bypassed altogether when Israeli combat engineers found a way through seemingly impassable terrain.<sup>199</sup>

Unit cohesion among Syrian formations in Lebanon was actually quite good. For the most part, Syrian units stuck together and fought back under all circumstances. With the exception of the combat along the Beirut-Damascus highway on 22-25 June when Syrian units seem to have cracked under the combination of the strain of their lengthy combat, the constant Israeli airstrikes, and the clear superiority of Israel's elite infantry

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<sup>195</sup> Anthony Cordesman, *Jordanian Arms and the Middle East Balance*, (Washington, DC: Middle East Institute, 1983), p.77.

<sup>196</sup> Cordesman, *Jordanian Arms*, p. 54; Cordesman and Wagner, pp. 215-216; Laffin, pp. 120-121.

<sup>197</sup> Asher, p. 54; Cordesman, *The Arab-Israeli Military Balance*, p. 117, fn. 56; Cordesman and Wagner, p. 174; Moreaux, March 1986, p. 42.

<sup>198</sup> Israel's pathological aversion to taking casualties invariably made some of their battles seem like massacres when in fact their casualties would have been considered negligible, even non-existent, by most other militaries.

<sup>199</sup> On this point, see Laffin, p. 52.

formations, few Syrian units simply disintegrated in combat. The rule was that Syrian units fought hard and then stuck together and retreated well. Although it is true that Israeli pressure was uncharacteristically light on the Syrian armored forces withdrawing up the Bekaa after their defeat on 10 June, there were still many instances of Syrian units showing good discipline and retreating in good order under much heavier pressure. The Syrian commandos in particular showed outstanding unit cohesion. In many fights they clung to their defensive positions until they were overpowered by elite Israeli infantry units, and in several clashes Syrian commando units fought to the last man to hold particularly important positions or when acting as rear guards to allow other forces to escape to safety.<sup>200</sup>

### *Sources of Defeat*

The reasons for Syria's defeat in 1982, and for the partial nature of this defeat, are actually quite straitforward. Once again, the crucial factor in the defeat was the limited capabilities of Syrian forces at the tactical level. In combat--regardless of the odds, the terrain, or any other factors--Syrian units simply could not defeat Israeli units. Other factors were largely either irrelevant or washed out in the balance, leaving only the differences in tactical proficiency to decide most of the engagements. For instance, Israel's considerable numerical advantage was more than compensated for by the enormous advantage the Syrians possessed by defending Lebanon's rugged terrain. Likewise, the IAF did not participate to a meaningful extent in many of the critical ground battles of the war, especially the crushing defeat of the reinforced 1st Armored Division in the Bekaa valley.

Israel's victory over the Syrians was not more decisive because of a variety of reasons. First, credit must be given to the Syrian commandos, whose defensive skills allowed them to delay and hinder the Israeli armored columns in every way as they moved through the mountains. The terrain itself was, of course another major factor. Lebanon's mountain's allowed the Syrians to rely on ambushes by their commandos rather than having to slug it out in mechanized combat with IDF armored divisions. The terrain greatly enhanced Syrian defensive capabilities, provided countless fall-back positions, and greatly channeled Israeli movement, preventing the IDF either from bringing their quantitative advantages to bear or from maneuvering off-road and rolling up Syrian ambush positions from the flank. Third, the IAF was mostly distracted by their desire to avenge the losses of 1973 by annihilating the Syrian air and air defenses. In addition, Israeli strike aircraft had difficulty locating and targeting Syrian forces in the Lebanese terrain and many of their airstrikes were ineffective because of the mountains.

Probably the most important reason that Syria's defeat was not worse, however, was the erratic, stop-and-go pace of the Israeli operation. Between the political constraints on the operation, the staggered mobilization and concentration of forces for the offensive, and the failure of Israeli commanders to press the attack at key moments, the Israeli offensive was anything but an onslaught. Every time the Israelis got going, they would just as suddenly slow to a halt. Israeli forces advanced in sudden leaps followed by long pauses. They would move forward, smash a Syrian position and then halt in their tracks. These constant pauses gave the Syrians the opportunity to regroup, reinforce their positions, and establish new defensive lines that the Israelis then had to break through once more. Clearly the most important instance of this problem was on 10 June when Ben Gal's Bekaa Forces Group failed to aggressively pursue and destroy the fleeing 1st Armored Division. Although the Syrians were retreating in good order, there is no question that the Israelis could have caught them and--given the fact that the Syrians had been badly mauled when fighting from prepared positions against Israeli frontal attacks earlier in the day--probably obliterated the entire division. This would have

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<sup>200</sup> See in particular J.M. Moreaux's comments, in Moreaux, March 1986, p. 28.

allowed the IDF to seize the Beirut-Damascus highway and seal the route from Syria, thereby preventing the 3rd Armored Division from ever making it into the Bekaa.<sup>201</sup>

Had the Israelis been able to conduct an all-out attack right from the start there can be little doubt that the war would have been a much greater catastrophe for Syria. The ability of Syria's commandos to take advantage of the terrain suggests that the Israeli victory might not have been as lopsided as, say their defeat of the Egyptians in Sinai in 1967, but it would have been very considerable.

### **The Syrian Military Since 1982**

Between 1982 and 1990, Syrian forces continued to participate in combat operations in Lebanon, occasionally against the Israelis, but mostly against various Lebanese militias as Syria struggled to reassert its dominion over the country. Unfortunately, little detailed information is available regarding the conduct of these battles or the performance of Syrian troops in them. Similarly, Syria sent the 9th Armored Division and a brigade of commandos to participate in the coalition opposing Iraq in the Gulf War, however, they were considered politically unreliable by the coalition military commanders, in part because Asad would not decide until the last minute whether he would allow them to participate in the ground offensive against Iraq. Consequently, they were assigned a reserve role and did not see combat.<sup>202</sup> Still, a number of points can be made about the Syrian armed forces since the Israeli invasion of Lebanon.

The Syrians generally appear to have learned little from their experience against the Israelis. After the war, the Syrians wholeheartedly praised their own performance, in particular citing the courage and prowess of their commandos, while blaming their reverses on poor Soviet equipment and the omnipotent Israeli Air Force.<sup>203</sup> After the war, the Soviets were greatly concerned and embarrassed by the swift Israeli destruction of their SAM systems, and quickly rebuilt Syria's air defense network, complete with the provision of SA-5 strategic SAMs. In general, the primary Syrian reaction to the war was to acquire more, and more modern Soviet weaponry like Su-24 strike aircraft, MiG-29 fighters, more T-72 tanks, and advanced Soviet air-to-air missiles and ATGMs. Syria also expanded the size of its military establishment, adding seven new divisions and increasing overall size to 400,000 men, 4,800 tanks, 4,150 APCs, 2,700 artillery pieces, 530 combat aircraft, and 250 SAM batteries.<sup>204</sup>

The Syrians have made some efforts to address their debilitating tactical deficiencies. They have made half-hearted efforts to improve training in combined arms operations, maneuver warfare, and air-to-air combat. They also have tried to some extent to encourage junior officers to show initiative. But little has really changed since 1982. Syrian exercises and operations are routinely described as "slow-moving," "set-piece," and "inflexible." Syrian formations at all levels and in all services show little predilection for maneuvering in combat and Syrian tank crews and pilots are considered poor and not

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<sup>201</sup> For an emphatic concurring opinion that Syria got off lightly because of Israeli failings rather than Syrian successes, see Wald, pp. 21-54.

<sup>202</sup> Michael R. Gordon and Lt. General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, (Boston: Little, Brown and Co., 1995), pp. 251-253, 466; US Department of Defense, *Conduct of the Persian Gulf War*, Final Report to Congress, April 1992, (Washington, DC: GPO, 1992), pp. 236, 265, 273, 282, 288-289, 500.

<sup>203</sup> Mark A. Heller, "Israeli and Syrian Military Concepts in Light of the Lebanon War," *IDF Journal*, Winter 1989, pp. 42-46.

<sup>204</sup> Cordesman, *The Arab-Israeli Military Balance*, pp. 45, 113; Cordesman and Wagner, pp. 275-278, 285-287, ; Eisenstadt, pp. 31-40, 57-76.



getting much better despite prodigious efforts to improve their training. Innovation and improvisation among junior officers is rarely and sometimes even actively discouraged.<sup>205</sup>

The Syrians also continue to have considerable difficulties in absorbing the masses of equipment they have purchased. Syrian crews and pilots seem no more comfortable with their weapons than they have been in the past. Syria has not been able to train enough personnel to man most of its equipment, and as of the late 1980s it had 1,000 tanks that lacked trained crews and a pilot-to-aircraft ratio of less than 1:1 and probably close to 1:2 (that is two planes for every qualified pilot). Syrian maintenance has improved little if at all since 1982. As of 1992 only two-thirds of Syrian tanks were fully operational.<sup>206</sup>

The one positive sign for Syria is that, as they began to do after the 1973 War, the Syrians have slowly come to recognize their strengths and weaknesses and to try to emphasize their abilities and minimize areas of problems. The Syrians continue to concentrate on SAMs and AAA as their primary forms of air defense, recognizing that their poor abilities in dogfighting make it problematic to rely on their air force for cover. Damascus has built up a large and imposing arsenal of surface-to-surface missiles as a means of compensating for its inability to penetrate sophisticated air defense barriers (such as Israel's) with fixed-wing aircraft and the difficulties it has experienced in conducting ground-attack missions. The Syrians greatly improved the extent and depth of their defenses in front of Damascus to prevent a repeat of Israel's drive on Damascus in 1973. Finally, the Syrians continue to try to expand their commando forces as the only really capable units in their army. Damascus now has an "airborne" division--composed of commando brigades--as well as seven independent commando brigades.<sup>207</sup>

### **Summary: Syrian Military Effectiveness 1947-1991**

In general, Syrian military effectiveness since the Second World War has shown many of the same patterns of behavior as other Arab armed forces. On the plus side, the Syrians consistently demonstrated superb unit cohesion and individual bravery. Indeed, the Israelis have always noted the incredible ferocity and determination of Syrian soldiers and pilots. Syrian forces fought well in static defense roles, and performed adequately when conducting set-piece operations.

On the down side, Syrian forces regularly displayed problems in tactical leadership that hampered their conduct in free-wheeling maneuver warfare. In particular, Syrian junior officers showed little initiative, improvisational ability, flexibility, or capability for independent action. The Syrian chain of command invariably was rigidly overcentralized, plagued by the compartmentation of information, and skewed by bizarre command and control relationships and the constant reshuffling of senior commands. Syrian skills in armored, artillery, air-to-air, and air-to-ground operations were miserable. Syria had tremendous difficulty assimilating new weaponry into its force structure and Syrian personnel never were able to take full advantage of the capabilities of their equipment. The Syrians also were hindered by poor maintenance and technical support more generally. Syrian generalship varied significantly, although it was mostly

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<sup>205</sup> Cordesman and Wagner, pp. 279, 290, 352-354; Zeev Eytan and Aharon Levran, *The Middle East Military Balance*, 1986, (Boulder, Co: Westview Press, 1986), pp. 183-185.

<sup>206</sup> Cordesman, *The Arab-Israeli Military Balance*, pp. 45, 121, 157; Cordesman and Wagner, pp. 279-285; Efraim Karsh, *Gulf War Lessons: Syria*, Report for the Center for National Security Studies, Los Alamos National Laboratory, 1992, p. 4.

<sup>207</sup> Cordesman, *The Arab-Israeli Military Balance*, pp. 118-119; Cordesman and Wagner, pp. 278-279; Eisenstadt, pp. 51-54, 69-72; Goodman and Carus, pp. 18-19.

mediocre. The one thing that must be said in defense of Syria's strategic leaders is that they mostly performed better than the forces under their command.

Two anomalies in Syrian performance stand out from this otherwise solid pattern. First is the relatively creditable performance of Syrian forces in Palestine in 1948. Especially when compared to the Iraqis and Egyptians, the Syrians performed noticeably better in certain categories of military performance. However, most of these areas of strength are properly attributable to Syria's senior officers, suggesting that it was their training under the French or perhaps the relative absence of commissarist political controls--or both--that led to this exceptional performance. Second, there is the better performance of Syria's commandos in 1982 in many categories of tactical performance. In this case, the better performance seems to be a result of the elite nature of the Syrian commandos. The commandos were picked troops, given longer and more demanding training, and with a strong sense of *esprit de corps*. As a result, the Syrian commandos, still a small force compared to the overall military, were able to develop marginally better skills in a number of important aspects of combat operations.

## Summary Chart of Syrian Military Effectiveness, 1947-1991

Category	Wars					
	1948	1967	1970	1973	1976	1982
Tactical creativity	Poor	Poor	Poor	Poor	Poor	Poor
Strategic creativity	Good	Poor	Adequate	Adequate	Adequate	Adequate
Information flows	--	Poor	--	--	--	--
Tactical initiative	Good	Poor	Poor	Poor	Poor	Poor*
Strategic initiative	Adequate	Poor	Adequate	Adequate	Adequate	Good
Centralization/Delegation	Adequate	Poor	Poor	Poor	Poor	Poor
Simplicity of Chain of Command	Adequate	Poor	Poor	Poor	--	Poor
Tactical use of maneuver	Poor	Poor	Poor	Poor	Poor	Poor*
Strategic use of maneuver	Good	--	--	Good	Adequate	Adequate
Employment of armor	Adequate	Poor	Poor	Poor	Poor	Poor
Employment of artillery	Poor	Poor	Poor	Poor	Poor	Poor
Air-to-air combat skills	--	Poor	--	Poor	--	Poor
Air-to-ground operations	Adequate	Poor	--	Poor	--	Poor
Ad hoc operations	Poor	Poor	Poor	Poor	Poor	Poor
Set-piece operations	Good	--	--	Adequate	Poor	Adequate
Combined arms	Adequate	Poor	Poor	Poor	Poor	Poor*
Unit cohesion	Good	Uneven	Good	Good	--	Good
Personal Bravery	Good	Good	Adequate	Good	--	Good
Maintenance and repair	--	Poor	Poor	Poor	--	Poor
Assimilation of equipment	--	Poor	Poor	Poor	--	Poor
Logistics	Adequate	Adequate	Adequate	Adequate	--	Poor
Combat engineers	--	--	--	Poor	Poor	--
Technical support	--	Poor	--	Poor	Poor	Poor
Tactical intelligence	--	Poor	Poor	Poor	Poor	Poor
Strategic intelligence	--	Poor	Good	Good	--	Poor
Operational Security	Good	Poor	Adequate	Good	Adequate	Adequate
Tactical leadership	Poor	Poor	Poor	Poor	Poor	Poor*
Strategic leadership	Good	Poor	Adequate	Adequate	Poor	Adequate
Ability to Plan and Execute Complex Military Operations	Adequate	Uneven	--	Good	Uneven	--
Officer rotations	--	Poor	Poor	Poor	Poor	Poor
Morale (at the start of the war)	Good	Adequate	Good	Adequate	Adequate	Adequate
Attention to training	Poor	Poor	Adequate	Adequate	Adequate	Adequate
Direction of training	Poor	Poor	Adequate	Adequate	Adequate	Adequate
Ability of soldiers to benefit from military training	Poor	Poor	Poor	Poor	Poor	Adequate
Preferred operational tempo	--	Slow	Slow	Slow†	Slow	Slow
Attention to offensive operations	Adequate	Poor	Excessive	Excessive	Excessive	Excessive
Attention to defensive operations	Adequate	Poor	Poor	Poor	Adequate	Adequate
Attention to air superiority	--	Poor	Adequate	Adequate	Adequate	Adequate
Unit and service coordination	Poor	Poor	Poor	Adequate	Poor	Poor
Willingness to take casualties	--	Low	--	--	Low	Adequate

A blank square indicates insufficient information was available to make a judgment in this category for the particular war.

\* - Syrian commandos would merit a rating of "adequate" in these categories (and a rating of "good" in the category of tactical initiative). However, Syrian commandos were only a small part of the Syrian forces in Lebanon and therefore I rated the Syrians based on the performance of the bulk of the armed forces.

† - During the October War, Syrian strategic leaders--division commanders and above--emphasized maintaining a high rate of advance, as per Soviet doctrine. However, their forces were incapable of operating at this high tempo. The Syrians were only able to maintain a rapid pace on the first day or two of their advance by sacrificing enormous combat losses for speed, and were unable to keep up this trade-off past 7 October.

## Chapter 10

### Saudi Military Effectiveness, 1990-1991

Unlike the armed forces of most of the other Arab states, the modern Saudi military was conceived in war. 'Abd al-Aziz Ibn Sa'ud, the founder of the state of Saudi Arabia, ruled a tribe that had briefly held sway over much of the Arabian peninsula during the 18th and 19th centuries when it adopted a fundamentalist brand of Islam known as Wahhabism.<sup>1</sup> At the turn of the twentieth century, Ibn Sa'ud drew upon the religious fervor of his Wahhabi tribesmen to once again conquer most of the peninsula. Ibn Sa'ud's Bedouin warriors, called the *Ikhwan* (brethren), first defeated the powerful Shammar tribe to secure central and eastern Arabia, then took the Hijaz—including the holy cities of Mecca and Madinah—from the Hashim clan, and finally wrested the southern province of Asir from the Yemenis. By 1926, Ibn Sa'ud was master of three-fourths of the Arabian peninsula, having been prevented from further expansion only by the mountains of Yemen in the south, and in the east and north by the British who ruled Transjordan and Iraq, and were the protectors of Kuwait, the Trucial States (later the UAE and Qatar), Oman, and Aden.<sup>2</sup>

While Ibn Sa'ud was motivated by the material desire to expand his kingdom, his followers fought to spread the true religion. They saw themselves as successors to the armies that first conquered the Middle East, North Africa, and central Asia for Islam. Thus when Ibn Sa'ud pragmatically recognized that he could not attack the British mandatory lands and protectorates and therefore ended his military campaigns, he came into conflict with the *Ikhwan*. The *Ikhwan* were only interested in furthering the true way of Islam and revolted against Ibn Sa'ud when he stopped leading them against foreign foes. Relying on the tribal levies from his homeland in the Najd region of central Arabia, and equipped with some modern weaponry (including machine guns and armored cars) from the British, Ibn Sa'ud crushed the *Ikhwan*. The end of the *Ikhwan* revolts left Ibn Sa'ud the undisputed ruler of the kingdom he named Saudi Arabia (Sa'udi Arabiyyah).<sup>3</sup>

For the next thirty years the structure and role of the Saudi military, such as it was, grew in fits, and overall made little progress. Throughout this period, the dominant influence on Saudi military development was the ambivalence of the Royal family regarding the mission and importance of its armed forces. Riyadh vacillated between fearing the army as a potential threat to the monarchy and relying on the army to defend the Kingdom against foreign threats. Consequently, Saudi military fortunes fluctuated markedly depending on whether the Royal family's changing perception of its greatest threat.

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<sup>1</sup> The term Wahhabism derives from the religious leader who began the movement, Muhammad al-Wahhab. Within the Kingdom, the Saudi version of Islam is generally referred to as "Unitarianism" when it is differentiated from other interpretations of the religion.

<sup>2</sup> Robert Lacy, *The Kingdom: Arabia and the Haouse Sa'ud*, Paperback Edition, (New York: Avon Books, 1981), pp. 64-203; J. E. Peterson, *Defending Arabia*, (NY: St Martin's Press, 1986), pp. 19-193; Nadav Safran, *Saudi Arabia: The Ceaseless Quest for Security*, Paperback Edition, (Ithaca, NY: Cornell University Press, 1985), pp. 28-49; Peter W. Wilson and Douglas F. Graham, *Saudi Arabia: The Coming Storm*, (Armonk, NY: M. E. Sharpe, 1994), pp. 35-42.

<sup>3</sup> Lacy, pp. 201-214; Peterson, p. 193; Safran, pp. 49-55; Wilson and Graham, pp. 44-46, 144.

During the period immediately before and after World War II, the Saudi armed forces languished. The Saudis purchased some modern equipment, especially as their oil revenues grew after the war. The Saudis also invited in British and then American military officers to help train their forces and plan the defense of their realm. However, the Royal family continued to rely largely on tribal levies for their military forces, and their military methods remained largely based on the traditional form of warfare Ibn Sa'ud had employed in conquering Arabia. For the most part, the as-Sa'ud's principal military concern was maintaining the unity and obedience of their realm against potential revolts by rival tribes. There were few foreign threats to the Kingdom, thus there was little reason to make a determined effort to turn the Saudi army into a modern military.<sup>4</sup>

### **Saudi Military Modernization**

Events in the Middle East in the 1950s and 1960s brought external security considerations back to the fore in Riyadh. A series of incidents beginning in the mid-1950s spurred the Saudis into greater interest in enhanced conventional military capabilities. In 1954, Nasser's accession to power in Egypt and his support of revolutionary movements throughout the region, made the as-Sa'ud very nervous, especially after several pro-Nasser cabals were uncovered in the Kingdom. These fears were exacerbated by Egypt's massive intervention in Yemen against the Imam of Sanaa and its attacks on Saudi bases from which Riyadh had been supplying the Royalist forces. The astonishing Israeli victory over the Arabs in the Six-Day war then created fears of Israeli expansionism, while the 1971 British announcement that they were withdrawing from all lands "East of Suez" deprived the Saudis of their longtime European protector. The Marxist takeover in South Yemen (Aden), the resulting Soviet presence there, and then Aden's support for the quasi-Marxist rebels in Dhofar province of Oman further alarmed the Saudis. Finally, the Islamic revolution in Iran and the outbreak of the Iran-Iraq war, completed Riyadh's sense of vulnerability and encirclement. Although the United States eventually stepped in to fill the gap left by the British withdrawal, and the Saudis began to assiduously develop strong security ties to Washington, Riyadh still felt it had to take a greater role in providing for its own security more than in the past.<sup>5</sup>

Beginning in the early 1960s, Saudi Arabia slowly began to try to build a modern military capable of withstanding foreign attack. The most obvious sign of this shift in priorities was the tremendous increase in Saudi defense spending, which peaked in the 1980s. Between 1980 and 1993, the Saudi military accounted for 27-39 percent of Riyadh's budget every year. Since about 1970, the Saudis have had the highest per capita defense-spending in the world and generally have spent four times as much as Israel on defense on an annual basis.<sup>6</sup> Saudi military spending was very rational, largely as a result of the heavy involvement of Western military advisers. Rather than spend the money frivolously on shiploads of expensive hardware, the bulk of Saudi defense spending went to infrastructure development, training, maintenance, and logistical support. Weapons purchases constituted only about 5-15 percent of annual defense spending during the 1980s.<sup>7</sup> In particular, the Saudis were careful to import weapons in smaller, more easily digested chunks rather than buying enormous fleets of fighters and tanks that would have

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<sup>4</sup> Mordechai Abir, "Saudi Security and Military Endeavor," *The Jerusalem Quarterly*, Fall 1984, No. 33, pp. 81-82; Peterson, pp. 193-194; Safran, pp. 57-112; Wilson and Graham, pp. 46-50, 144-146

<sup>5</sup> Abir, p. 82; Anthony Cordesman, *After the Storm*, (Boulder, CO: Westview, 1993), p. 565; Adeed Dawisha, "Saudi Arabia's Search for Security," in Charles Tripp ed., *Regional Security in the Middle East*, (NY: St Martin's Press, 1984), p. 15; Thomas McNaugher, "Arms and Allies on the Arabian Peninsula," *Orbis*, Vol. 28., No. 3, Fall 1984, p. 501; Peterson, 194-195; Wilson and Graham, pp. 146-147.

<sup>6</sup> Abir, p. 84; Cordesman, *After the Storm*, p. 566; Wilson and Graham, pp. 147-148.

<sup>7</sup> Cordesman, *After the Storm*, pp. 566-569; Safran, pp. 180-196, 420-430.

swamped their slowly modernizing armed forces.<sup>8</sup>

The Saudis brought in foreigners both to cover their short-term vulnerability and to build their long-term strength. To bolster Saudi defenses immediately, Riyadh hired British and Pakistani pilots who formed the backbone of the Royal Saudi Air Force (RSAF) in the 1960s and 1970s. In 1980, the Saudis went so far as to hire as many as 10,000 Pakistani military personnel to serve in the Saudi armed forces. About half of this contingent manned the Saudi 10th Armored Brigade in its entirety, including officer billets and support personnel. Large numbers of American and European civilian and military personnel were brought in to run Riyadh's maintenance and logistics networks, while the menial jobs connected with these functions were filled with impoverished South and East Asians.<sup>9</sup> Meanwhile, the Saudis brought in large numbers of foreign advisers, mostly Americans, to train their soldiers to fight like a modern army. By the mid-1980s there were roughly 30,000 Americans, 4,000-5,000 French, 2,000-3,000 British--as well as the 10,000 Pakistanis--supporting a Saudi military of 50,000 men.<sup>10</sup>

The Saudi military modernization program heavily favored their air and air defense forces. There were a variety of reasons for this emphasis. First, only air forces could be employed against hostile forces in the air, on the land, and at sea. Second, airpower could be based centrally and then deployed quickly anywhere in their vast realm, allowing the Saudis maximum flexibility in shifting their strength to meet a threat. Third, many of the direct threats with which Riyadh had had to contend during this period were air threats--Egyptian bombings in the 1960s, Israeli "touch-and-go" passes at Saudi airfields in the 1970s and 1980s, and an Iranian-Saudi dogfight over the Persian Gulf in 1984.<sup>11</sup> Fourth, a small air force could, in theory, offset a much larger enemy army, thereby reducing the strain on Saudi manpower. Fifth, in the desert terrain of Saudi Arabia, all ground forces are highly vulnerable to air attack, thereby making control of the skies crucial to offensive or defensive operations. Sixth, the RSAF quickly became the playground of princes, who saw piloting a modern jet fighter as fun and an enormous source of prestige. Last, the as-Sa'ud were more willing to build a small, competent air force--whose loyalty could more easily be assured--than a large ground force.<sup>12</sup>

For all of these reasons, Riyadh made its air and air defense forces its highest priority. The RSAF had the largest number of US advisers and the greatest access to US training programs of all Saudi services. By the 1980s, virtually every Saudi pilot had had some training in the US. The Saudis pushed hard for the most advanced and powerful weaponry for their air force, and despite the constant opposition of the Israel lobby in the US, they eventually were able to get most of what they wanted, including F-15 Eagle fighters and E-3A Sentry Airborne Warning and Control System (AWACS) aircraft. In 1985, the US and the Saudis began a program called Peace Shield, intended to build an advanced, integrated air defense system for the Kingdom second only to that defending

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<sup>8</sup> Anthony Cordesman, "Defense Planning in Saudi Arabia," in Stephanie G. Neuman, *Defense-Planning in Less-Industrialized States*, (Lexington, MA: Lexington Books, 1984), p. 81.

<sup>9</sup> Cordesman, *After the Storm*, p. 570; McNaugher, p. 502; Richard F. Nyrop ed., *Saudi Arabia: A Country Study*, (Washington, DC: GPO, 1984), p. XXVI; Safran, pp. 130, 431, 440; Wilson and Graham, pp. 157, 167. The Pakistanis comprising the 10th Armored Brigade were sent home in 1987 when some Pakistani personnel refused to fight in a border clash with Yemen, claiming that they were there to fight the infidel (the Israelis) but would not fight brother Muslims. At that point, the Saudis attempted to hire Bangladeshis to replace the Pakistanis but the deal fell through.

<sup>10</sup> Abir, p. 89; Aharon Levran and Zeev Eytan, *The Middle East Military Balance, 1987-1988*, The Jaffee Center for Strategic Studies, (Boulder, CO: Westview, 1988), p. 175; McNaugher, p. 502; Safran, p. 440.

<sup>11</sup> A "touch-and-go" is when a pilot puts down his landing gear, touches down on the runway as if to land, and then takes off again and races away. The Israelis made it a practice of conducting these stunts at Saudi airfields from time to time to remind the Saudis of their vulnerability to Israeli airpower.

<sup>12</sup> Cordesman, *After the Storm*, p. 562; Anthony Cordesman, *The Gulf and the West*, (Boulder, Co: Westview, 1988), pp. 232-239; Peterson, p. 195, Wilson and Graham, p. 151.

NATO. This design included the provision of new radars, surface-to-air missiles (SAMs), battle management facilities, and communications links.<sup>13</sup>

### Politicization

The extent of Riyadh's commitment to military effectiveness implied by a twenty-year modernization and expansion effort should not be overstated. The Saudis long cultivated the belief that in time of dire need their great Western protector--first Britain and then America--would come to their rescue. Moreover, the Saudis were also wary of their military: the Saudi armed forces were needed to keep rival tribes from seizing the throne, but were themselves a dangerous potential threat to the regime. Consequently, commissariat politicization figured prominently throughout this period as Riyadh sought to ensure the loyalty of the military and prevent it from mounting a successful coup.

Commissariat politicization in Saudi Arabia was fairly far-reaching. Military units were generally deployed along the periphery, facing the Kingdom's greatest threats and far from the capital and the oilfields. While this was important for strategic reasons, it was enforced as much to keep Saudi military units away from the seat of government and its greatest asset as it was to keep them near potential trouble spots. Communications among Saudi units was purposely hamstrung: the ground forces were incapable of communicating with the Air Force without going through the armed forces high command, while up until the mid-1980s Saudi combat units generally could not communicate with each other except via higher echelons. For many years the Saudis insisted on arming certain units wholly with French and British equipment and other units entirely with American equipment. One reason for this practice was that it allowed the Saudis to diversify their arms purchases, giving them leverage and reducing their vulnerability to the Israel lobby in the US. Of equal importance, however, this incompatibility made it difficult for these units to coordinate their operations, thereby limiting their ability to defeat the regime's internal security forces and takeover the government.<sup>14</sup>

Perhaps the most obvious symbol of the as-Sa'ud's fears was the Saudi Arabian National Guard (SANG). After the first Nasserist plots were discovered in the 1950s, King Sa'ud ibn 'Abd al-Aziz (the son of Ibn Sa'ud) created both a Royal Guard regiment and what was then called the White Army and later became the SANG. The SANG was formed from the remnants of the Ikhwan and the tribal levies of the House of Sa'ud, both of whom were fanatically loyal to the as-Sa'ud themselves, rather than to the state of Saudi Arabia.

While the Royal Guard regiment was literally a palace guard furnishing the household troops for the King, the SANG was a larger force, intended to defend the regime's control over the country against an army coup. The SANG was deployed around Riyadh and at other key locations around the country, such as in the oilfields of al-Hasa, the eastern province. The SANG chain of command was kept completely separate from that of the other armed forces, culminating in its own ministry headed by Crown Prince Abdullah. Because of its importance to the regime, and the need for it to be capable enough to defeat the larger and more heavily armed Army in the event of a coup, the SANG also received extensive support from the US. In the 1970s, a US firm was contracted to completely reorganize, arm, and train the SANG as an elite internal security force. The SANG was equipped and organized in light, mobile brigade-sized forces like armored cavalry--ideal for rapid movement in the Arabian desert, but also harkening back to the days of the Ikhwan, when cavalry dominated the wars of the peninsula. Nevertheless, because of their regime protection responsibilities, senior officers in the

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<sup>13</sup> Cordesman, *After the Storm*, pp. 586-600; Cordesman, *The Gulf and the West*, pp. 232-239; Peterson, pp. 195-197; Wilson and Graham, pp. 149-154.

<sup>14</sup> Abir, p. 82; McNaughton, pp. 503-504; Wilson and Graham, p. 140.



SANG were chosen largely for their loyalty to the as-Sa'ud, and even as the SANG expanded to keep pace with the increase in size of the other services, all personnel were still recruited exclusively from loyal Najdi tribes.<sup>15</sup>

This tribal, or regional, preference also affected the other armed services. The as-Sa'ud were most comfortable with Najdi tribesmen, believing them to be the most devoted to the royal family. Riyadh was least enthusiastic about the large *shi'ah* population of al-Hasa, who were almost completely excluded from the armed forces because they were considered politically unreliable. In addition, the as-Sa'ud disliked accepting Hijazis into the armed forces. The Hijaz did not embrace Saudi rule, and Hijazis somewhat unwilling subjects of the Saudi monarchy. The Hijazis generally consider themselves more cosmopolitan and sophisticated than the Najdi tribes upon whom the as-Sa'ud base their rule, and some Hijazis still felt they ought to rule instead. Thus despite the fact that, as a group the Hijazis were probably the best educated in the country, Riyadh tried to minimize their presence in the military. Nevertheless, the drive to expand and modernize the armed forces, coupled with general problems in recruiting adequate numbers of fit manpower, forced the Saudis to accept larger numbers of Hijazis. Because Najdis were given greater preference in the RSAF and SANG, the Hijazis were very well represented in the army--the Royal Saudi Land Forces (RSLF)--and dominated its technical and support branches.<sup>16</sup>

Another manifestation of politicization affecting the Saudi military was the rampant nepotism and prevalence of royal family members throughout the military. To some extent, this was a function of commissarism, as Saudi princes were assigned to key positions to ensure that all important posts were in the hands of men loyal to the royal family. However, the ubiquity of Saudi princes was mostly a manifestation of unadulterated favoritism: many Saudi princes wanted important jobs commensurate with their station and being a military officer--a warrior--was one of the more desirable occupations for members of the royal family. Since there were several thousand princes by the late 1980s, it was very easy to populate the senior military ranks exclusively with members of the royal family.<sup>17</sup>

The presence of so many princes, and the manner by which they achieved high military rank, created other problems. First, advancement within the armed forces was tied heavily to patronage and had little to do with demonstrated ability. The military also was riven with factionalism as different cliques within the royal family vied for control over the armed forces. Both of these factors badly skewed promotions, personnel assignments, and chains of command. Indeed, on many occasions, Saudi princes defied the orders of their superiors, and when challenged, successfully appealed to senior members of the royal family.<sup>18</sup>

### Manpower Problems

Another problem the Saudis had to contend with in the two decades preceding the Gulf War was a shortage of fit men for the armed services. For example, after the Gulf war Anthony Cordesman estimated that the Saudi force structure required 100,000-

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<sup>15</sup> Abir, pp. 81-83; Cordesman, *After the Storm*, pp. 582-583; Dawisha, pp. 7, 16; McNaugher, pp. 497, 503; Nyrop, p. 265; Wilson and Graham, pp. 146-147, 156-158.

<sup>16</sup> Abir, pp. 88-89; Cordesman, *After the Storm*, p. 570; Safran, p. 439.

<sup>17</sup> Abir, p. 82; Lincoln P. Bloomfield, Jr., "Commentary: Saudi Arabia's Security Problems in the 1980s," in Stephanie G. Neuman, *Defense-Planning in Less-Industrialized States*, (Lexington, MA: Lexington Books, 1984), p. 104; Cordesman, *After the Storm*, p. 565; Cordesman, "Defense Planning in Saudi Arabia," p. 69; Wilson and Graham, p. 151.

<sup>18</sup> Abir, p. 82; Lincoln P. Bloomfield, Jr., "Commentary: Saudi Arabia's Security Problems in the 1980s," in Stephanie G. Neuman, *Defense-Planning in Less-Industrialized States*, (Lexington, MA: Lexington Books, 1984), p. 104; Cordesman, *After the Storm*, p. 565; Cordesman, "Defense Planning in Saudi Arabia," p. 69; Wilson and Graham, p. 151.

150,000 men, but that Saudi armed forces actually had only about 76,500 personnel.<sup>19</sup> In particular, the Saudis had great difficulty finding enough technically competent personnel to operate and maintain their burgeoning arsenal of sophisticated military hardware.<sup>20</sup>

A wide variety of factors contributed to this problem. The Saudi military was all volunteer, meaning Riyadh had to try to persuade skilled personnel to join the armed forces instead of starting a career elsewhere. This proved very difficult because of the strong allure of the Saudi financial and oil industries. Young Saudi men could make a fortune quickly and easily by taking a job in the oil sector or a related field. Opportunities to get rich via graft were plentiful in other industries (including arms imports) and the lifestyle of a Saudi businessman was far more appealing to young Saudi men than was the life of a soldier. Beyond this, Saudi Arabia's oil wealth, and the corresponding largesse distributed by the government to its people, meant that many Saudis did not feel the responsibility to choose *any* career. Thus in 1990, Saudis constituted only 33 percent of their workforce and only 10 percent of the private sector workforce. Overall, only 54 percent of Saudi men were employed.<sup>21</sup>

The Saudis also had difficulty finding adequate personnel for their military because so few who were interested in joining were fit to serve. Even into the late 1980s, illiteracy hung at around 50 percent among the Saudi populace, and these numbers were highest among the tribesmen who were the most interested in serving in the armed forces (especially the SANG). Those who could read often had only the most rudimentary education, and had little or no exposure to machinery or electronics. The Saudis also were limited by the fact that very few of their people were willing to take on a job that they saw as menial labor--hence the support services suffered--and very few Saudi students studied technical subjects--hence there were few personnel available qualified to handle advanced military technology. The Saudi educational system did not teach much in the way of science and engineering because of the low demand, and even those who joined the military were often reluctant to learn technical skills needed for their jobs.<sup>22</sup>

Manpower problems became a kind of Catch-22 for the Saudis in the years preceding the Gulf War. Because the Saudis could not recruit enough personnel to field a mass army to defend the Kingdom they opted for a smaller high-tech, high firepower force that would not need high manning levels. However, this approach immediately ran into the dearth of technically competent people, severely limiting Riyadh's ability to man such a force. For example, the Saudi emphasis on their air force was one manifestation of their strategy of a small, high-technology force to compensate for manpower deficiencies. However, because of the shortage of trained, technically-skilled personnel the Saudis had great difficulty operating more than about 200 combat aircraft. Better pilots had to be shifted onto more advanced planes, with the result that the pilots flying some of Riyadh's older jets had very limited competence.<sup>23</sup>

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<sup>19</sup> Cordesman, *After the Storm*, p. 570.

<sup>20</sup> Cordesman, *After the Storm*, pp. 570-572; Cordesman, *The Gulf and the West*, pp. 194-217.

<sup>21</sup> Cordesman, *The Gulf and the West*, p. 200; Nyrop, p. 265; Anthony Pascal, Michael Kennedy, and Steven Rosen, *Men and Arms in the Middle East: The Human Factor in Military Modernization*, Rand R-2460-NA, (Santa Monica: RAND, 1979), p. 44; Wilson and Graham, p. 254.

<sup>22</sup> Cordesman, *The Gulf and the West*, p. 194; McNaugher, p. 501; Levon H. Melikian, "The Modal Personality of Saudi College Students: A Study in National Character," in L. Carl Brown and Norman Itkowitz eds., *Psychological Dimensions of Near Eastern Studies*, (Princeton, NJ: The Darwin Press, 1977); Peterson, p. 199; Wilson and Graham, p. 166.

<sup>23</sup> Cordesman, *The Gulf and the West*, pp. 211, 239; Peterson, p. 197.

## **The Gulf War, 1990-1991**

The Iraqi invasion of Kuwait in early August 1990 caught the Saudi armed forces completely off-guard. The Saudis were still in the midst of their seemingly permanent military modernization program and had made only limited progress toward fielding a deterrent force able to meet the security needs of the Kingdom. Nevertheless it was galling to the Saudi people to discover that after spending roughly \$300 billion on defense between 1965 and 1990 their military was still virtually impotent.<sup>24</sup>

### **The Saudi Military in 1990**

Saudi armed forces at the outset of the war were no match for the Iraqis alone, and were fortunate to be able to fight alongside a vast Western army, as well as sizable contingents from several other Arab countries. In 1990, the Royal Saudi Land Forces (RSLF) comprised two armored brigades, four mechanized infantry brigades, one infantry brigade, and one airborne brigade with about 45,000 men and 550 tanks. In addition, the SANG added another two motorized brigades (with a third forming) along with infantry units posted at sensitive facilities throughout the Kingdom and the Royal Guards regiment--all told another 20,000 personnel and about 300 armored fighting vehicles. The Saudi Air Force had 15 squadrons with 250 combat aircraft, including 60 F-15s and 70 Tornado fighter-bombers.<sup>25</sup>

The Saudis did have some factors in their favor. Saudi forces had the benefit of their long tutelage under the Americans as well as weapons that were at least as good as those of the Iraqis, and in some cases far superior. For example, while Saudi M-60A3 and AMX-30 tanks were about on a par with Iraq's T-72s and T-62s, Saudi F-15s were clearly superior to anything in the Iraqi inventory, including their MiG-29s and Mirage F-1s. Moreover, both sides suffered equally from having a wide range of military equipment from a variety of arms makers. Thus while the Saudis had some units equipped with British and French gear and other units equipped with American gear, the Iraqi forces had a melange of Soviet, French, Chinese, and South American equipment.<sup>26</sup> In addition, the Saudis were able to overcome their manpower problems to some extent through wartime volunteers. In August 1990, the Saudis asked for volunteers to fill out their ranks for the war and although they expected only about 25,000 they ended up with over 200,000.<sup>27</sup>

Because of the presence of the Americans and the other Coalition forces, Saudi units were able to fight in situations where they were evenly matched with the Iraqis, obviating Iraq's numerical advantages in men and materiel. The one advantage the Iraqis did have over the Saudis was their mostly veteran (albeit war-weary) army. Saudi forces on the other hand, had seen little combat since the days of Ibn Sa'ud. Some Saudi units had participated in the Green Mountain revolt in Oman in the late 1950s. Riyadh had sent a small contingent amounting to an understrength brigade to participate in the Six-Day war against Israel in 1967, but its troops saw little action. The Saudis clashed with Yemeni forces along their borders on several occasions during the 1960s and 1970s, but these were rarely more than minor incidents involving platoons or companies of troops. Finally, the Saudi Air Force had had a few run-ins with Iranian attack aircraft during the 1980s, culminating in the shootdown of at least one and probably two Iranian F-4s by a pair of Saudi F-15s in 1984. These incidents constituted the sum total of Saudi combat

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<sup>24</sup> Wilson and Graham, p. 140.

<sup>25</sup> Cordesman, *After the Storm*, pp. 572, 582; IISS, *The Military Balance, 1990*, (London: IISS, 1990); Wilson and Graham, pp. 156-157.

<sup>26</sup> Peterson, p. 198

<sup>27</sup> Cordesman, *After the Storm*, p. 571.

experience, whereas, the Iraqis had had eight years of combat against Iran to hone their military skills. While the Iraqi army never reached a high level of military competence, the conflict with Iran gave Iraqi commanders valuable experience in planning and leading their forces in combat, and gave their troops a taste of battle.

### **The Course of Operations**

When the Iraqis invaded Kuwait the Saudis had to scramble to get forces in place to meet a potential Iraqi drive into their Kingdom. The Saudis had only two combat formations in the northeast, the 20th Mechanized Brigade at Hafr al-Batin and the SANG 2nd Motorized Brigade around Dhahran. As late as 20 August, there were only two combat-ready Saudi battalions in the entire Eastern province. It took a long time for the Saudis to prepare their forces for this redeployment as most were disorganized and unready and took inordinately long to get organized and move. The Saudis had never really thought through such a contingency and their moves suffered at every level. Thus when US forces began arriving as part of Operation Desert Shield in mid-August they found the two Saudi brigades near Kuwait in positions from which they could not adequately defend the main invasion routes into Saudi Arabia and highly vulnerable to outflanking. At tactical levels, Saudi units had failed to dig-in properly, to site their positions to provide overlapping fields of fire, or to place their units where they could easily support one another. In short, Riyadh was very fortunate that the Iraqis did not continue their attack into Saudi Arabia. Indeed, after the fact, the Saudi high command estimated that during the first week of August the Iraqi Republican Guard could have overrun the entire eastern province in as little as six hours, perhaps as many as twelve if US airpower intervened.<sup>28</sup>

US military personnel placed little faith in Saudi combat capabilities. Based on the experience many had had with the Saudis in training or on joint operations, the Americans largely assessed that the Saudis would have no impact on the Coalition campaign against Iraq whatsoever. Many, including high-ranking US officers, expected the Saudis to run away *en masse* at the first sign of combat. In addition, US officers who had experience with the Saudis had noted their tendency to dissemble and obfuscate rather than having to admit a mistake. As a result, US military commanders carefully structured Coalition operations to minimize the role of the Saudis and to make sure that the Saudis only went into battle under optimum conditions. US air and artillery forces were assigned to provide fire support to the Saudis, Saudi units were assigned only supporting functions in less critical sectors of the front, and US military personnel were attached to Saudi forces to provide advice and to make sure that Saudi reporting was accurate.<sup>29</sup>

### ***Saudi Performance During the Coalition Air Campaign***

Saudi Arabia's greatest contribution to the Coalition war effort came in the air campaign. US military planners considered the RSAF, and particularly its F-15 pilots, to be the most competent element of the Saudi military. US pilots who had flown with the

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<sup>28</sup> James F. Dunnigan and Austin Bay, *From Shield to Storm*, (NY: William Morrow and Co., 1992), p. 247; Jacob Goldberg, "Saudi Arabia and the Gulf Crisis," paper prepared for the Center for National Security Studies, Los Alamos National Laboratory, Los Alamos, New Mexico, March 1992, pp. 4-5; Michael R. Gordon and Lt. General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, (Boston: Little, Brown and Co., 1995), p. 73; HRH General Khaled bin Sultan, *Desert Warrior: A Personal View of the Gulf War by the Joint Forces Commander*, (NY: Harper Collins, 1995), pp. 9-14.

<sup>29</sup> Rick Atkinson, *Crusade: The Untold Story of the Persian Gulf War*, (NY: Houghton Mifflin, 1993), p. 205; Molly Moore, *A Woman at War: Storming Kuwait with the US Marines*, (NY: Charles Scribner's Sons, 1993), pp. 17, 49; Norman Friedman, *Desert Victory*, (Annapolis, MD: Naval Institute Press, 1991), p. 232; Gordon and Trainor, pp. 170-172, 190-191, 265.

Saudis unanimously averred (both before and after the war) that Saudi F-15 pilots were very good at dogfighting, and so Coalition military commanders assigned the Saudis a somewhat more demanding mission during the air campaign than they did during the ground campaign.<sup>30</sup> The Saudis flew 6,852 sorties during Operation Desert Storm, including roughly 2,000 over Iraq and the Kuwaiti Theater of Operations.<sup>31</sup> Over one-third of these sorties (nearly 2,400) were counterair missions flown by F-15s and Tornado interceptors. Saudi fighters primarily flew defensive combat air patrol (CAP) duties over Saudi Arabia: 93 percent of all Saudi F-15 sorties and 100 percent of all Tornado interceptor sorties were defensive counterair missions.<sup>32</sup>

Despite the large number of sorties flown, because the Saudi fighters mostly flew defensive CAP missions, they had only one opportunity to engage in air-to-air combat. On 24 January 1991 a Saudi F-15 shot down two Iraqi fighters probably trying to attack Coalition ships in the Persian Gulf. Although the result was perfect, the actual engagement was not. The Saudi pilot initially panicked when he was vectored out to intercept the Iraqis. US AWACS air controllers had to carefully position the Saudi pilot so he could get an ideal shot on the two Iraqi planes and then had to talk the pilot through the entire operation. Fortunately, the Iraqis made only a minimal effort to shake the F-15 and were shot down relatively easily.<sup>33</sup> In this and other engagements, Saudi fighters demonstrated a particular inability to operate in formations larger than pairs as well as difficulty acting on information provided by AWACS.<sup>34</sup>

Saudi pilots flew fewer airstrike missions as part of the Coalition air campaign than counterair missions, reflecting both US military planners' lower confidence in Saudi attack proficiency and their poor showing in the initial missions they flew. According to the Gulf War Air Power Survey (GWAPS), Saudi aircraft flew 1,656 strike missions during the Gulf War.<sup>35</sup> The airstrikes the Saudis conducted were extremely poor and added little to the overall Coalition effort. For example, on the first night of the Coalition attack, a flight of Saudi Tornado attack aircraft failed to link up with a tanker for refueling and so their mission had to be aborted. Another Tornado got separated from the rest of its flight and lost its way to the target, and was nearly shot down by a US F-15.<sup>36</sup> After the war, US forces had the opportunity to closely inspect Safwan airfield, one of the targets left to the Saudis, and found that it had sustained almost no damage in airstrikes by Saudi Tornados. In general, Saudi pilots were only able to fly strike missions against fixed, lightly-defended targets with US planning and support. The Saudis could not locate moving targets, and Iraqi ground-based air defenses regularly caused their pilots either to abort their mission or to miss their targets. The Saudis were incapable of planning or controlling their own operations, they could not operate in formations larger than squadron-level, and they had no real strategy or concept of operations as to how to attack enemy targets.<sup>37</sup> Moreover, Anthony Cordesman commented on RSAF performance in Desert Storm that, "It proved to have little operational flexibility in

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<sup>30</sup> Cordesman, *The Gulf and the West*, p. 203; Gordon and Trainor, p. 265; and author's interviews with US military personnel, April-July 1991.

<sup>31</sup> Eliot A. Cohen and Thoms A. Keaney, *The Gulf War Air Power Study, Volume II, Part I: Operations*, hereafter referred to as GWAPS, (Washington, DC: GPO, 1993, p. 185; Cordesman, *After the Storm*, p. 596.

<sup>32</sup> GWAPS, Vol. V, Part I: A Statistical Compendium, pp. 232, 335, 343.

<sup>33</sup> Gordon and Trainor, p. 265; Wilson and Graham, p. 161, esp. fn. 47.

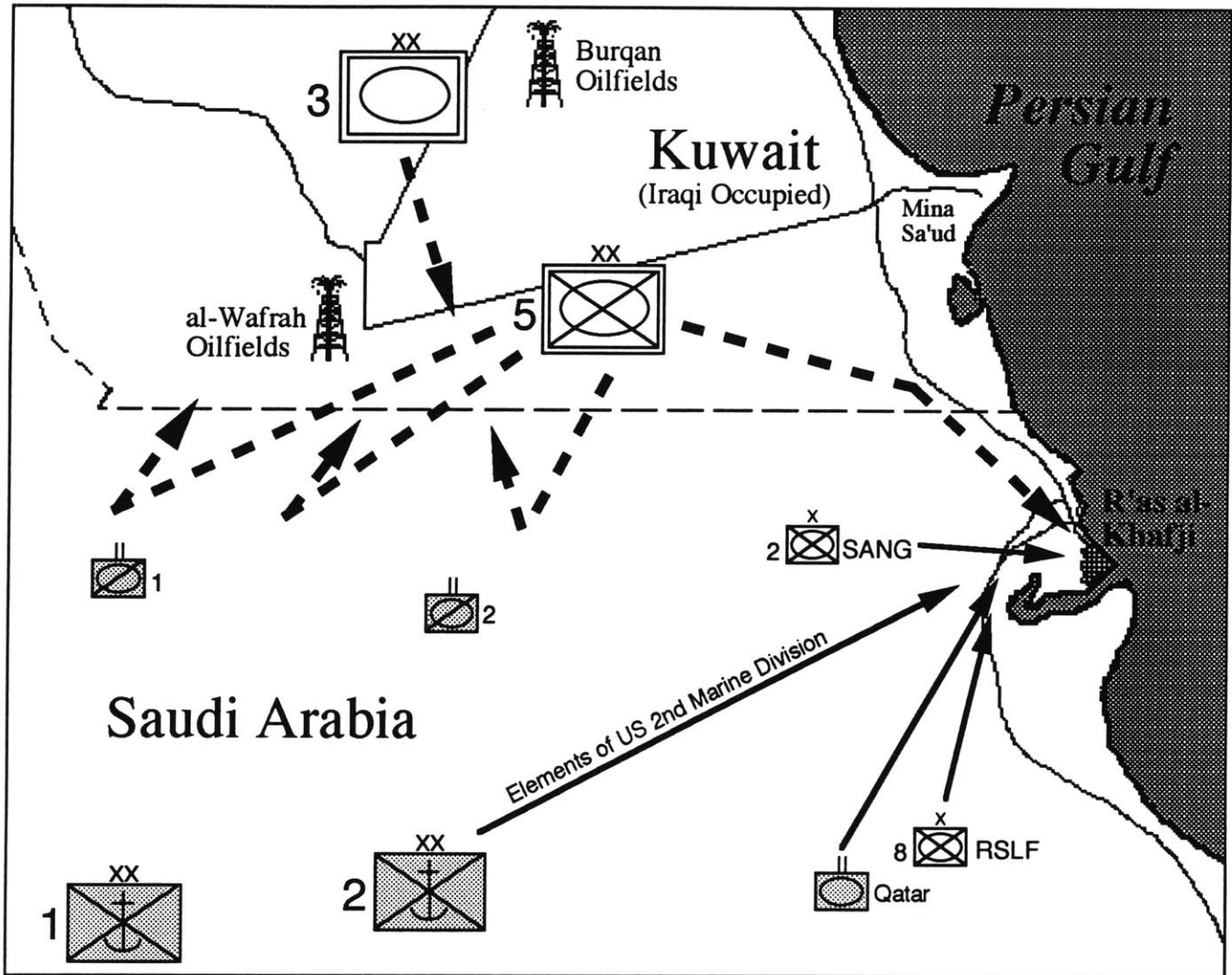
<sup>34</sup> Gordon and Trainor, p. 265; Cordesman, *After the Storm*, pp. 596-597.



<sup>35</sup> GWAPS, Vol. V, Part I: A Statistical Compendium, p. 232.




<sup>36</sup> Gordon and Trainor, pp. 221-222.

<sup>37</sup> Christopher Bellamy, *Expert Witness: A Defence Correspondent's Gulf War, 1990-1991*, (London: Brassey's, 1993), p. 140; Cordesman, *After the Storm*, pp. 596-597.

# The Battle of R'as al-Khaji, 29-31 January 1991



 - Iraqi attacks, 29-31 January  
 - Coalition countermoves, 29-31 January

 - Saudi units  
 - Other Coalition units  
 - Iraqi units

adapting range training to actual . . . missions."<sup>38</sup>

Finally, RSAF reconnaissance was infrequent and of little value. The RSAF was asked to fly only 118 reconnaissance sorties during the entire course of the war.<sup>39</sup> In Cordesman's words, "The Saudi RF-5 force proved largely useless in seeking out targets and rapidly processing information."<sup>40</sup> Consequently, the Saudis were forced to rely on the US for all reconnaissance and intelligence for their strike missions.<sup>41</sup>

### *The Battle of R'as al-Khafji*

Saudi Arabia's most significant ground combat occurred in the Battle of R'as al-Khafji in late January. During the night of 29 January, the Iraqis launched a series of probing attacks into northern Saudi Arabia by battalion-sized task forces from the 5th Mechanized Division. Three of these probes ran into US Marine covering forces and were driven back with heavy losses. A fourth Iraqi column, a mechanized infantry battalion reinforced with a company of tanks, blundered into a Saudi screening force north of the Saudi coastal city of R'as al-Khafji. The Saudis put up a very brief resistance and then fled. A Saudi mechanized battalion in the area retreated when the US Marines began reporting contact with Iraqi armor, as did Saudi marines guarding the beaches north of Khafji fled all the way to al-Mishab, nearly 60 kilometers to the rear. The disintegration of Saudi forces in this area allowed the Iraqis to occupy the town<sup>42</sup>

The Saudi government and military high command were incensed by the Iraqi occupation of Khafji. While of no military significance, it was a humiliating blow to Saudi pride, and they became obsessed with retaking the town--and retaking it themselves. As a result, US Marine Corps forces that had moved to reinforce the threatened sector and were in position to assault and retake the town the next morning were ordered to remain in place and allow the Saudis to conduct the operation. Meanwhile, the Iraqis were massing two of their better heavy divisions--the 3rd Armored and the 5th Mechanized--for a major offensive designed to trap and maul the Saudi units congregating around Khafji. This attack never came off, however, because US airpower located the two Iraqi heavy divisions in southern Kuwait as they mustered for the assault and cut them to pieces. The relentless pummeling from Coalition attack aircraft and helicopter gunships convinced the Iraqis to call off their offensive, leaving the force in Khafji abandoned to its fate.<sup>43</sup>

The odds at Khafji heavily favored the Saudis. Riyadh massed the SANG 2nd Motorized Brigade reinforced by a battalion of Qatari AMX-30 tanks for the operation. The Saudis also had their RSLF 8th Mechanized Brigade standing by to join the operation if needed. In addition, the Saudis could call on fire support from US Marine artillery battalions and attack aircraft. Although the Iraqi troops were all veterans of countless battles during the Iran-Iraq war, they were unenthusiastic about this war and their equipment was terrible: obsolete and poorly manufactured Chinese Type-63 APCs and Type-59 tanks (a bad Chinese copy of the old Soviet T-55). In addition, the Iraqis were completely isolated, their lines of supply and communication having been cut by US airpower which prevented additional Iraqi forces from pushing down the coast road to reinforce the units in Khafji. Finally, the Saudis had the benefit of a US Marine reconnaissance team that had gotten trapped in Khafji by the Iraqi attack and served as

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<sup>38</sup> Cordesman, *After the Storm*, p. 597.

<sup>39</sup> GWAPS, Vol. V, Part I: A Statistical Compendium, p. 232.

<sup>40</sup> Cordesman, *After the Storm*, p. 597.

<sup>41</sup> Cordesman, *After the Storm*, p. 597.

<sup>42</sup> Atkinson, pp. 202-208; Dunnigan and Bay, pp. 261-262; Gordon and Trainor, pp. 275, 277; Dennis Steele, "Down in the Sand: The First Brushes," *Army*, March 1991, p. 34;

<sup>43</sup> Atkinson, pp. 208-210; Gordon and Trainor, pp. 268-272, 281-284; Dunnigan and Bay, p. 263; Bruce W. Watson, et. al., *The Military Lessons of the Gulf War*, (London: Greenhill Books, 1991), p. 94.

artillery spotters behind the Iraqi lines throughout the battle.<sup>44</sup>

The first Saudi attack was finally launched during the night of 30 January. The Saudis had taken a long time to get their units into place, nevertheless, they sent their forces into battle without any real strategy to retake the town, without a fire support plan, without setting up a liaison link with the Marines, without any means of communication between the Saudi and Qatari units and without any training in urban combat. The first attack was conducted by a reinforced battalion from the SANG brigade plus the Qatari armored battalion. The Saudis advanced directly up the main road to Khafji--right into the teeth of the Iraqi defenses--and then suddenly the Saudi APCs deployed for an attack and charged off at the Iraqis. Neither the US Marine advisory group attached to the Saudi unit nor the Qatari armor had any idea what was going on as the Saudis apparently had issued an order to attack only on their battalion command net. The Qatari armor, at a loss as to what to do, simply stopped, while the Saudi mechanized infantry launched a frontal assault on the Iraqis, who easily beat back their clumsy charge.<sup>45</sup>

The Saudis retreated, regrouped and attacked again, this time with the Qatari tanks. Although both battalions attacked simultaneously, the results were the same. The Saudis conducted another frontal assault, charging headlong at the Iraqis with no effort either to outflank the Iraqi positions or even to use a combination of fire and movement to pin the Iraqis while an assault force closed with them. The Saudis and Kuwaitis simply rushed forward, stopping occasionally to fire but rarely causing even minor damage. This attack too was driven back quickly and easily, but fortunately for the Saudis, the Iraqis were poor marksmen and remained completely passive, refusing to counterattack or even maneuver against the Saudis. As a result, neither side suffered many casualties in the attack.<sup>46</sup>

The Saudis pulled back to regroup, but remained determined to liberate Khafji themselves. During the night, their US advisers gave the SANG units a quick lesson in urban combat operations and arranged for a massive Marine artillery bombardment to accompany the next attack. In Riyadh, however, the government was virtually apoplectic over the failure of their forces to recapture the town and restore the Kingdom's injured pride. King Fahd went so far as to ask US military leaders to reduce the entire city to rubble so that if the Saudis could not retake it, at least the Iraqis would not be able to stay. Cooler heads prevailed, the city was not bombed, and another Saudi attack was set for the morning.<sup>47</sup>

The second Saudi assault was an even larger effort than the first. The Saudis concentrated the entire SANG 2nd Brigade for the operation, again supported by the Qatari armored battalion. As noted above, US Marine artillery was to provide fire support and US attack aircraft were brought in to provide close air support. In addition, the Saudis sent two battalions of their RSLF 8th Mechanized Brigade north of the town to establish a blocking force to prevent the Iraqis from sending reinforcements to aid the units in Khafji. By this point on 31 January, the Iraqis had long since called off their attack and abandoned their units in Khafji. The Saudi army units encountered some company-sized Iraqi units--the paltry elements of the 5th Mechanized Division that had made it past their own lines before the rest of the division retreated in the face of the Coalition airstrikes. These units were trapped, tired, weak, and completely demoralized from the air assault and were easily overpowered by the Saudis. Nevertheless, the Saudi

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<sup>44</sup> Atkinson, pp. 209-211; Dunnigan and Bay, p. 262; Gordon and Trainor, pp. 272-285; David B. Ottaway, "For Saudi Military, New Self-Confidence!" *The Washington Post*, April 20, 1991, p. A14.

<sup>45</sup> Atkinson, p. 209; Bellamy, p. 93; Cordesman, *After the Storm*, p. 582; Dunnigan and Bay, pp. 262-263; Gordon and Trainor, p. 282; Steele, p. 35.

<sup>46</sup> Atkinson, p. 209; Bellamy, p. 93; Cordesman, *After the Storm*, p. 582; Dunnigan and Bay, pp. 262-263; Gordon and Trainor, p. 282; Steele, p. 35.

<sup>47</sup> Khaled, pp. 382-387; Ottaway, p. A14; Wilson and Graham, p. 161.



army forces reported that they had encountered and destroyed a full brigade of Iraqi armor.<sup>48</sup>

The main attack against the Iraqis defending Khafji was not much of a contest. The assault began with a heavy artillery barrage by the Marines, behind which the Saudi brigade crept forward. US aircraft then began hitting major Iraqi strongpoints while American attack helicopters flew up and down the streets of Khafji, knocking out Iraqi tanks and APCs as they flew. The Saudis again conducted a frontal assault, without maneuver, covering fire, or combined arms coordination. The Saudi units just marched forward behind the artillery and airstrikes, stopping occasionally to add their own fire to the attack. When they reached the town itself they ran helter-skelter through the streets, firing in all directions--often failing to remain in formation--rather than conducting a determined, block-by-block clearing operation. The Iraqis fought back at first, but were simply overwhelmed by the magnitude of the firepower they faced. By around 1 PM the Iraqi defensive lines in the southern portion of the town had collapsed and many were surrendering to the Saudis. Although snipers and small pockets of Iraqi troops resisted throughout the afternoon, the Saudis reoccupied the city and, by nightfall, the entire Iraqi force had surrendered.<sup>49</sup>

### *The Coalition Ground Offensive*

Saudi ground forces were mostly kept out of the spotlight during the Coalition ground offensive. For political reasons, the Saudis, and the other Arab armies participating in the war against Iraq were made responsible for "liberating" Kuwait City. One Arab force--a division-sized formation called the Joint Forces Command-East (JFC-E)--was assigned the axis of advance up the coast road from R'as al-Khafji directly to Kuwait City. The JFC-E included the RSLF 10th Mechanized Brigade, the RSLF 8th Mechanized Brigade, and the SANG 2nd Motorized Brigade, as well as a Kuwaiti brigade and battalions and companies from most of the other Gulf Emirates. Here the Saudis could be supported by naval gunfire from the Coalition armada in the Persian Gulf, including the American battleships USS Wisconsin and USS Missouri. In addition, if the Saudis ran into trouble, the Coalition military command could give it support from the US Marine divisions driving into the opposite side of southeastern Kuwait. The Saudis also contributed two brigades--the 20th Mechanized and 4th Armored of the RSLF--to the Joint Forces Command-North (JFC-N). The JFC-N was centered around an Egyptian corps-sized formation, which Coalition military commanders expected to be far more capable than the Saudis. The Saudi units, along with two Kuwaiti brigades, were banded together under two multi-brigade formations called Task Force Khalid and Task Force Muthanna and were assigned the mission of guarding the right flank of the Egyptian advance on al-Jahrah.<sup>50</sup>

The JFC-E had a virtual cakewalk up the Kuwaiti coast. The Saudis attacked early on the morning of 24 February, simultaneous with the Marine attack farther west. The Iraqi 18th Infantry Division defending this sector simply collapsed into a swarm of surrenders and desertions. Its troops were sick and tired of living in the desert with inadequate supplies and constant air attack, and were itching to surrender. Later that day, the Iraqis pulled most of their remaining combat formations out of the Saudi sector to try to stop the far more dangerous US Marine advance, leaving the Saudis an open road to Kuwait city. During their advance up the coast, the only serious resistance the Saudis faced was from a battery of Iraqi artillery pieces that put up a desultory barrage until

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<sup>48</sup> Dunnigan and Bay, p. 262; Gordon and Trainor, pp. 284-285; Khaled, p. 383.

<sup>49</sup> Atkinson, pp. 210-212; Bellamy, p. 93; Cordesman, *After the Storm*, p. 582; Dunnigan and Bay, pp. 262-263; Gordon and Trainor, pp. 285-286; Khaled, pp. 382-387; Steele, p. 35.

<sup>50</sup> US Department of Defense (DOD), *Conduct of the Persian Gulf War*, (Washington, DC: GPO, 1992), pp. 512-513.

Saudi multiple-rocket launcher units and artillery batteries opened up on them. Although the Saudis did little damage to the Iraqi battery, it was enough to convince the unenthusiastic Iraqi crews to abandon their guns and head for al-Basrah. For the most part, the only resistance the Saudis faced was the occasional Iraqi soldier who waited to blow-off one magazine of his AK-47 for pride before surrendering.<sup>51</sup>

Nevertheless, the JFC-E advance was slow and lagged behind the Marine advance which faced much heavier resistance. To some extent, the Saudis were slowed by the huge number of Iraqi prisoners, but this was not the only problem. Although the SANG units attacked with great determination and moved quickly to secure their objectives, the RSLF formations were slow, plodding and extremely timid in conducting their operations. The RSLF units were particularly unaggressive, unwilling to diverge from their set plans, unable to adapt to unforeseen circumstances, and uninterested in exploiting the undefended avenue in front of them. One account of the Gulf War remarked that the RSLF "struggled to stay up with the National Guard and operated like a garrison army, highly dependent on Filipino bottle-washers and Pakistani mechanics."<sup>52</sup> Moreover, whenever there was a change in plan, such as when their US advisers wanted the Saudis to speed up the timetable of their advance, the Saudis insisted on stopping and referring the matter all the way up the chain of command to Prince Khalid, the commander of all Coalition Arab forces.<sup>53</sup>

Saudi units attached to Task Force Khalid of the JFC-N performed even worse than the JFC-E, primarily because of the absence of SANG units in this formation. The JFC-N moved at the slowest pace of all the Coalition forces in Operation Desert Storm. On the second day of the ground war, the JFC-N had barely breached the Iraqi defensive lines and still had not taken its first day objectives despite the fact that the Iraqi forces in front of them had offered virtually no resistance and had mostly surrendered or fled.<sup>54</sup>

The lion's share of the blame for this awful showing must go to the Egyptians who commanded the JFC-N and formed the primary assault force, but the Saudis (and the Kuwaitis) did nothing to ameliorate the Egyptian problems. First, the Saudis and Kuwaitis simply could not advance the timetable for their operations. When the US military command realized that the Iraqi defenses were crumbling they moved up the start times for the US VII Corps and JFC-N attacks. Originally, both of these formations had been scheduled to attack in the early morning of 25 February, but now they were ordered to attack during the afternoon of 24 February. The Egyptians refused to comply until ordered to do so by Cairo, and even then were late getting started, but the Saudis simply could not get moving and made only a very minor effort on 24 February. When they did get going on the morning of 25 February, the Saudis moved slowly and tentatively, displaying little aggressiveness. The Saudis lost contact with the Marines on their right, did a poor job of screening the Egyptian flank, and made no effort to keep up with even the glacial advance of the Egyptian units. There were also friendly fire incidents between the Saudis and the Egyptians, although it is unclear which side was at fault. Ultimately, none of the JFC-N units were able even to come close to accomplishing their missions. Capturing al-Jahrah and the Matlah ridge were left to the US 1st Armored "Tiger" Brigade of the 2nd Armored Division, and token formations of the JFC-N were hastily

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<sup>51</sup> Gordon and Trainor, p.364; Khaled, pp. 404-507.

<sup>52</sup> Watson, et. al., p. 98.

<sup>53</sup> James Blackwell, *Thunder in the Desert*, (NY: Bantam, 1991), pp. 199-200; Lawrence Freedman and Efraim Karsh, *The Gulf Conflict 1990-1991*, (Princeton: Princeton University Press, 1993), p. 395; Khaled, p. 405; US DOD, *Conduct of the Persian Gulf War*, p. 513; Watson, et. al., pp. 94-110; Wilson and Graham, p. 162; and author's interviews with US military personnel.

<sup>54</sup> Blackwell, pp. 199-200; Freedman and Karsh, *The Gulf Conflict*, p. 395; Khaled, p. 409; US DoD, *Conduct of the Persian Gulf War*, pp. 264-265, 273, 513; Wilson and Graham, p. 162.

transferred east to participate in the "liberation" of Kuwait City.<sup>55</sup>

### **General Observations on Saudi Military Effectiveness During the Persian Gulf War**

Very little was asked of the Saudi military during the Gulf War and very little was delivered.<sup>56</sup> In some ways, the Saudis did surprise their critics. For example, most Western military personnel expected Saudi units to be unwilling even to go into battle and to break and run at the first shots, but many units--and particularly the SANG units--went into battle and fought stoutly. While it is true that Saudi units were never particularly taxed in combat, they often showed an unexpected degree of bravery and determination. In other ways, however, Saudi units performed even worse than projected. For example, the Saudi Air Force, which was expected to be the stand-out among Arab militaries because of its superb equipment and extensive US training, proved to have significant limitations. Specifically, while Saudi F-15s demonstrated very high air-to-air skills in small engagements, few Saudi pilots showed any real ability to operate in large formations or to handle particularly complex missions. Saudi strike and reconnaissance missions were of little value and could only be assigned missions of tertiary importance because Allied planners could not risk giving them more important assignments.<sup>57</sup>

Little can be said about Saudi performance at the strategic level because all of their military operations were essentially planned by the Americans. Once the US Central Command began deploying to Saudi Arabia on about 7 August 1990, defense of the country effectively fell to the Americans. The hasty Saudi deployment before the Americans began to arrive was awful--showing little real understanding of how to conduct a proper defense against a large armored force. Thereafter, the Saudi high command demonstrated little that would suggest they could have planned and executed large-scale combat operations, but they were never asked to do so. In short, the available evidence points to a very poor performance by Saudi strategic leadership, but one that had little or no impact on the actual course of the war.

At the tactical level, Saudi forces were awful. While the SANG troops were mostly very brave and determined fighters, they showed little military acumen despite their long tutelage under the Americans. Saudi attacks were invariably poorly-planned frontal assaults that showed no ability to employ fire and maneuver synergistically. Although Saudi attacks often featured both armor and infantry, and sometimes artillery, there was no effort to actually integrate these elements into a combined arms team in which each arm supported the others. Instead, Saudi forces simply rolled forward in an uncoordinated mass. Planning for both air and ground operations was very haphazard and, at least at Khafji, failed to provide for even the most basic elements such as timing, communications frequencies, and fire support. Saudi artillery fire was so poor it could do little more than conduct preliminary bombardments against fixed targets.<sup>58</sup>

Moreover, Saudi ground forces were virtually paralyzed by overcentralization and passivity. US military personnel report that operations were delayed sometimes for days by the necessity of referring all decisions up to the highest levels of command. Because

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<sup>55</sup> Blackwell, pp. 199-200; Freedman and Karsh, *The Gulf Conflict*, p. 395; Friedman, p. 232; Khaled, pp. 408-409; US DoD, *Conduct of the Persian Gulf War*, pp. 264-265, 273, 513; Watson, et. al., pp. 106-110; Wilson and Graham, p. 162.

<sup>56</sup> For concurring assessments, see Cordesman, *After the Storm*, pp. 572-598; and Wilson and Graham, pp. 140-161.

<sup>57</sup> No information is available to be able to assess Saudi performance in supporting air missions such as airlift, aerial refueling, and aerial surveillance. However, the Saudis are notorious for being unable to handle their AWACS aircraft properly. For example, in 1982 an Iranian pilot defected to Saudi Arabia in his F-4 Phantom, but was not detected by the Saudis until he landed on the runway at Dhahran. Later that year, another Iranian pilot defected to Egypt in a Boeing 707 and flew all the way across Saudi Arabia and landed in Cairo without ever being detected by the Saudis. See Safran, p. 446; Wilson and Graham, p. 153.

<sup>58</sup> See Cordesman, *After the Storm*, p. 578.

the Saudis generally made no effort to prioritize issues and could only make decisions by communal debate rather than staff work, the process of decision-making itself was extremely slow and further delayed operations. Since any change in plans could only be approved by this process, Saudi forces moved at a ponderous pace and were simply incapable of taking advantage of fleeting opportunities. Both the JFC-E and the JFC-N moved so slowly that gaps opened on both sides of the US Marine Corps advance into southeastern Kuwait, seriously worrying the commanders of the Marine divisions whose flanks the Arabs were supposed to be covering.<sup>59</sup>

The Gulf War also exposed a number of other problems in the Saudi armed forces. For example, Saudi Arabia's modern arsenal proved of little value because few Saudi personnel demonstrated an ability to handle their sophisticated equipment. In general the Saudis experienced tremendous difficulty learning to master their weaponry. For instance, of the dozens of militaries all over the globe that purchased Cadillac Gage V-150 armored fighting vehicles, Saudi troops took longest to learn to operate and maintain the vehicle.<sup>60</sup> Indeed, US military personnel concluded that it generally requires twice as long to train a Saudi in a technically demanding task than it would take to train a US soldier.<sup>61</sup> Even decades after equipment had been introduced into the Saudi military, the Saudis could not operate it properly. For example, by the Gulf War the Saudis were only just beginning to handle the maintenance of their fleet of old and relatively simple F-5 fighters on their own.<sup>62</sup> Mordechai Abir's 1984 comments that, "Reports of US federal agencies, private companies, and military analysts indicate that the training of Saudi operational and maintenance personnel to replace foreigners and to help incorporate systems into the Saudi armed forces, is years behind schedule, and that in some cases there is no solution in sight," continued to ring true in the early 1990s.<sup>63</sup>

Saudi maintenance practices were abysmal, but never became a significant problem because the Saudis relied heavily on foreign technicians to perform even the most minor services on their equipment. Saudi forces did not know the first thing about keeping their vehicles running. For example, Saudi tank crews did not even know to replace the air filters in their tanks. In one battalion, better than two-thirds of its M-60 tanks were inoperable because of clogged air filters only weeks after deploying from garrison to a defensive position in the desert.<sup>64</sup> Saudi Air Force attrition rates, even among the elite F-15 squadrons, were "significantly higher" than for US squadrons with the same aircraft.<sup>65</sup> Nevertheless, the Saudis employed a huge number of foreign technicians (mostly Westerners but also significant numbers of South and East Asians) to keep their vehicles running. As long as the Saudis could have their vehicles towed back to the rear area depots where these technicians worked they were fine, and the peculiar course of the conflict allowed the Saudis this luxury. The only Iraqi attack was at Khafji, which never developed into much of a battle thanks to the intervention of US airpower, so the Saudis had five months for their foreign contractors to bring their equipment up to peak readiness levels before the start of the Coalition offensive. Moreover, since during the ground war the Saudis faced little resistance, they did not tax their equipment, and since the ground battle lasted only four days, maintenance problems never became an issue.<sup>66</sup>

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<sup>59</sup> Watson, et. al., pp. 94-110; Blackwell, p. 199; Cordesman, "Defense Planning in Saudi Arabia," pp. 68-69; author's interviews with US military personnel, April-July 1991.

<sup>60</sup> Cordesman, *The Gulf and the West*, p. 207.

<sup>61</sup> Pascal, et. al., p. 46; Safran, p. 442.

<sup>62</sup> Abir, pp. 84, 87; Cordesman, *After the Storm*, p. 588.

<sup>63</sup> Abir, p. 87.

<sup>64</sup> Wilson and Graham, p. 161.

<sup>65</sup> Cordesman, *After the Storm*, p. 588.

<sup>66</sup> Nyrop, p. 266; Wilson and Graham, p. 166. This is not a new problem for the Saudis. Of 60 US tanks

Saudi unit cohesion was uneven, but mostly better than worse. Some Saudi units did break and run at the first sign of trouble, specifically some of the Saudi units deployed forward when the Iraqis began their Khafji offensive. Other Saudi units, particularly the RSLF, showed little desire to aggressively attack the Iraqis as part of the Coalition ground offensive. However, by and large, Saudi units fought hard and stuck together. For instance, even after the defeat of their inept first counterattack at Khafji, Saudi units did not fall apart but regrouped and attacked again the next morning.

In a number of additional areas, such as intelligence, logistics, communications, and air defense, it is not possible to assess Saudi performance because the Saudis relied entirely on foreigners.<sup>67</sup> For instance, as was the case with maintenance, the Saudi logistical system was manned and operated almost exclusively by foreign contractors and expatriates. Although the Saudis showed no particular indication that they would be capable of taking over and efficiently running their logistics system they never tried, thus it is impossible to conclude for certain the extent of Saudi logistics capabilities.<sup>68</sup> Likewise, the Saudis relied on the US and other Coalition members to gather and analyze intelligence for them and to direct the defense of Saudi airspace.

### *Summary*

Despite their radically different circumstances, military history, and political context, Saudi forces evinced many of the same patterns of behavior as other Arab armies. Saudi oil wealth and its close cooperation with the United States did not prevent its military from developing the same problems as the Egyptians, Iraqis, Jordanians, and Syrians. Indeed, in some ways, these advantages made these problems more likely and more debilitating. Saudi oil wealth allowed the Saudis to indulge certain tendencies, such as their unwillingness to accept jobs they consider menial labor or to pursue technical skills in school. As a result, Saudi personnel often displayed even less familiarity with machinery than their poorer brethren elsewhere in the Arab world. Similarly, because they knew that the US would be there to save them if things ever got too bad, the Saudis were able to treat military effectiveness in a somewhat cavalier fashion. In the end, the Saudis had little to show for the billions of dollars they had spent on defense since the first oil boom. Saudi troops fought like other Arab troops, only worse.

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delivered to the Saudis in 1959-1960, not one was operational by 1962. (Safran, pp. 104, 200.) In 1979, when tensions with Yemen prompted a limited Saudi mobilization, virtually all of the SANG's 400 armored cars were found to be non-operational due to maintenance problems. Moreover, the Saudis went berserk when the Vinnell Corporation (the US contractor hired to modernize the SANG) tried to get them to conduct regular maintenance on their vehicles. (Abir, pp. 91-92).

<sup>67</sup> Abir, p. 87.

<sup>68</sup> Peterson, p. 197; and McNaugher, p. 502.

### Summary Chart of Saudi Military Effectiveness, 1947-1991

Category	Gulf War
Tactical creativity	Poor
Strategic creativity	Poor
Information flows	Poor
Tactical initiative	Uneven
Strategic initiative	Poor
Centralization/Delegation	Poor
Simplicity of the Chain of Command	Poor
Tactical use of maneuver	Poor
Strategic use of maneuver	Poor
Employment of armor	Poor
Employment of artillery	Poor
Air-to-air combat skills	Uneven
Air-to-ground operations	Poor
Ad hoc operations	Poor
Set-piece operations	Adequate
Combined arms	Poor
Unit cohesion	Uneven
Personal Bravery	Good
Maintenance and repair	Poor
Assimilation of equipment	Poor
Logistics	
Combat engineers	
Technical support	
Tactical intelligence	Poor
Strategic intelligence	Poor
Operational Security	
Tactical leadership	Poor
Strategic leadership	Poor
Ability to Plan and Execute Complex Operations	Poor
Officer rotations	Adequate
Morale	Good
Attention to training	Poor
Direction of training	Good
Ability of soldiers to benefit from military training	Poor
Preferred operational tempo	Slow
Attention to offensive operations	
Attention to defensive operations	
Attention to air superiority	Good
Unit and service coordination	Poor
Willingness to take casualties	Low

A blank square indicates that inadequate information was available to make a judgment regarding performance in this category.

## **Part III**

### **The Tests**

Like the doctors in my original analogy, at this point in the study we have accomplished three things. First, we have made a cursory examination that suggested four possible ailments afflicting the patient. This was presented in the introduction, in which I noted the variety of theories that have been offered to explain the poor showing of Arab militaries in battle since World War II. Second we outlined the various symptoms in some detail to establish how the patient ought to look, feel, and behave if he were to have any of those maladies. This was conducted in Part I (Chapters 2-5), in which I laid out each of the four theories and the various predictions they make regarding Arab military effectiveness. Third, we examined the patient in great detail to establish exactly what was wrong with him. This examination was performed in Part II (Chapters 6-10), in which I detailed the performance of the Egyptian, Iraqi, Jordanian, Syrian, and Saudi armed forces in combat between 1945 and 1991.

What is left is to sort through the results of our examination and compare them to the symptoms known to accompany each ailment and see which conform most closely to the patient's condition. In other words, we must cull the history presented in Part II to establish to what extent it conforms to the various predictions made in Part I. This is the task of the third and final part of my study. In Part III, I assess the validity of the various theories by evaluating how well each explains the actual performance of the Arab armies and air forces in combat.

#### **Problems of Overdetermination**

Continuing with the analogy of the sick man, we must keep in mind that in medicine it is not always the case that a patient manifests all of the symptoms of only one disease, and that those symptoms are unique to that disease alone. A dying man may be sick with several different ailments, all, some, or none of which may be life-threatening. Similarly, perhaps only one is fatal, but it has gone unnoticed so far because everyone has paid attention only to the symptoms of the less harmful illness or illnesses. Alternatively, a man may not manifest all of the symptoms of a disease because of specifics of his case or his physiognomy, fooling the doctor into a misdiagnosis. Finally, two doctors may arrive at two totally different diagnoses because two different maladies are associated with many of the same symptoms.

The same problems afflict social science. A phenomenon may be the result of several causes, and observers may recognize only one. Alternatively, one explanation may be overlooked because the phenomenon does not manifest all of the features associated with that explanation. Likewise, two social scientists may recognize the same phenomenon, and agree on its specific features, but disagree on the explanation for the phenomenon because two different sources produce the same kinds of behavior, and one scholar thinks the phenomenon is caused by one source, and the other believes it is caused by the other source.

These are all issues which my study must address. It may be the case that more than one of the different theories is right because Arab military ineffectiveness may be the result of several influences. Similarly, we may be mistaking the sources of Arab military ineffectiveness because Arab militaries do not manifest every feature normally

associated with the "right" explanation because of idiosyncrasies in the cases. Finally, many of the theories described in Part I predict the exact same kinds of behavior. For example, the Arab culture, commissarism, palace guard, Soviet system, and underdevelopment theories all predict that Arab air forces will do poorly in air-to-ground missions. Consequently, we must structure our analysis to take into account the possibility that multiple factors have produced the phenomenon of Arab military ineffectiveness since 1945, or that one or more has been disguised--or "misdiagnosed"--because it has the same symptoms as the others. Therefore, in Part III, I use a range of different tests to try to sort out just which factors have produced the persistent patterns of Arab military effectiveness observed in Part II.

### **Overview of the Tests in Part III**

With these potential pitfalls in mind, I have designed Part III with six chapters, each of which performs a specific test designed to distinguish the relative explanatory power of each of the theories. Moreover, since this study focuses primarily on the influence of Arab culture on Arab military effectiveness, the tests are structured to focus most heavily on the Arab culture theory. By putting this theory through the most number of tests we can be most certain of its explanatory power.

In Chapter 11, I begin with a simple test that asks to what extent were the outcomes predicted by each of the theories in Part I fulfilled by actual Arab military history. More powerful theories, that is, those with the greatest ability to explain the phenomenon of Arab military ineffectiveness since 1945, should have more of their predictions fulfilled by actual history. In general, the more predictions of a theory fulfilled by the historical evidence, the more likely it is that the theory does accurately explain the phenomenon. In this test, I compare the performance of the various theories to one another, thus it is a competitive test or "three-cornered fight." Because I assess to what extent the dependent variable meshes with the behavior of the independent variable, but not the process by which the independent variable causes the behavior of the dependent variable, it uses the congruence method, rather than process tracing.

In Chapter 12, I test the proposed causal mechanism by which Arab culture is suspected to cause the predicted patterns of Arab military effectiveness. As described in Chapter 2, the Arab culture theory asserts that cultural methods are inculcated into Arab soldiers and officers through formal and informal processes of education beginning with childhood and proceeding right on into adulthood and military training itself. Chapter 12 assesses to what extent this has actually been the case by examining Arab educational methods employed in child rearing, schooling and military training. This test is what is referred to as a decisive positive test, because if the theory can pass the test the theory must be considered a serious explanation for the phenomenon, but if the theory fails the test, this does not necessarily discredit the theory as a whole. Essentially, the causal mechanism is not a crucial element of the Arab culture theory--culture may shape military behavior in several ways; therefore, demonstrating that education is not the causal mechanism does not mean that culture does not still shape military effectiveness. However, if it can be shown that education is the causal mechanism, this would be a powerful argument in favor of the Arab-culture theory. Because I follow the actual causal chain within the cases, this test employs "process tracing," and because it measures the explanatory power of the Arab-culture theory in isolation, it is a test against the null hypothesis or a "two-cornered fight."

In Chapter 13, I perform another test against the null hypothesis by looking at instances in which the influence of culture on Arab militaries was somehow mitigated and then observing whether, as predicted, there is a corresponding improvement in Arab military effectiveness. Thus this test seeks to ascertain whether there is covariance between the independent and dependent variables. In English, this means that it attempts to determine whether changes in Arab military effectiveness (my dependent variable) correspond to similar changes in Arab culture (my independent variable). This test



employs a combination of process tracing (to establish that culture has been mitigated by following the causal chain to demonstrate that it has been interrupted) and congruence testing (by comparing the inputs of Arab culture to the outputs of patterns of Arab military effectiveness).

Finally, I perform a series of additional competitive tests or "three-cornered fights," between the Arab culture theory and the other three explanations. One important goal of this study is to determine not only whether Arab culture has influenced Arab performance in combat, but also to try to establish the approximate importance of that influence compared to the influence of the other causes championed by the competing theories. To do this, I employ three different methods. First, I ask whether each of the competing theories passes the test against the null hypothesis by observing whether changes in the presence of the proposed independent variables (politicization, reliance on a Soviet model, economic underdevelopment) correlate with predicted changes in Arab military effectiveness. Second, I look at specific predictions made by the competing theories that are the opposite of predictions made by the Arab culture theory and examine Arab military history to see which predictions were fulfilled and which were not. Finally, I compare the generalized patterns of performance across the Arab world with the performance of other non-Arab states at war whose militaries have suffered from one or more of the same problems as Arab militaries.



## Chapter 11

### Did the Arab Militaries Perform as the Four Theories Predicted?

Part I of this study inferred numerous predictions regarding modern Arab military effectiveness while Part II detailed the military effectiveness of five Arab states from 1945 to 1991. Thus the first and most obvious test to be performed is a simple congruence test to determine whether the various "outcome" predictions inferred in Part I were fulfilled in the history presented in Part II. To the extent that a theory can be considered to provide a plausible explanation for Arab military ineffectiveness, its predictions should be borne out by the course of modern Arab military history. Those theories whose outcome predictions are fulfilled must be considered serious candidates as explanations for Arab military ineffectiveness during the postwar period. By contrast, theories whose outcome predictions are not fulfilled by the actual course of Arab military history must be considered of dubious value in attempting to explain this phenomenon. Thus this chapter sets up a competitive test--or "three-cornered fight"--among the various theories because it not only pits the Arab culture theory against the null hypothesis, but also pits it against each of the alternative explanations. By comparing how well the different theories predicted actual Arab military performance it is possible to assess both the ability of each theory to offer a valid explanation for the phenomenon on its own, and its relative explanatory power compared to each of the other theories.

For a theory to be considered a valid explanation for Arab military problems since 1945 it is not enough that most of its predictions are fulfilled. It is equally important that the categories of military effectiveness in which the theory predicted the Arabs would have difficulty were also the major contributors to their defeats (or to unimpressive victories). Ultimately, this study seeks to explain what factors have been most detrimental to the Arabs since the Second World War, and thus what it is that has brought them defeat or only modest victories in their wars. Only theories that predict poor performance in areas of military effectiveness that were important elements of Arab setbacks can be considered to explain this phenomenon. In the case of theories whose predictions were fulfilled but, whose predictions of poor performance were not in areas that were most detrimental to the Arabs, we must conclude that while the cause identified by the theory was probably present, it was not necessarily a major problem. In such cases, the theory would be disconfirmed as an explanation of the poor performance of Arab militaries since 1945.

In this chapter, I present the conclusions of these critical-congruence tests. I examine Arab performance in all of the areas of military effectiveness in which the various theories predicted specific patterns of behavior. I determine whether the military history of Egypt, Iraq, Jordan, Syria, and Saudi Arabia between 1945 and 1991 produced any patterns in these areas, and if so, whether the patterns matched those predicted by the various theories. I then comment on the importance of these various patterns in contributing to Arab victory or defeat. Finally, I present general conclusions on the extent to which these assessments support or discredit the four theories purporting to explain Arab military ineffectiveness.

### **Patterns of Arab Military Effectiveness, 1945-1991**

The following section summarizes my conclusions regarding patterns of Arab performance in the 41 categories pertaining to military effectiveness predicted by the various theories to show a specific pattern of behavior. For the most part, I have simply summarized the conclusions from the historical analyses presented in Part II, and provided references to historical events described in Part II as examples to support the conclusions. In the interests of brevity, I noted only a small number of the most important or best known examples and did not list every scrap of evidence that supported the conclusion. In addition, in many cases I commented on "sub-predictions" of the various theories; that is, more detailed predictions than the more general hypotheses. I also have briefly noted to what extent these conclusions confirm or disconfirm the various theories that predicted specific patterns of behavior in these areas.

For each of the four theories I essentially ask two questions. First, I ask whether the military experience of the Arabs 1945 conforms to the predictions of the theory at the most basic level. Thus, if a theory predicts that Arab air forces should perform poorly in air-to-air combat, I ask whether Arab air forces did in fact experience difficulties in dog fights. If the historical record shows that Arab air forces did not have problems with air-to-air combat then this is a mark against the theory. However, if the history does match the prediction at this most basic level, I ask another question. This second question is whether the historical evidence conforms to variations in the presence or influence of the independent variable proposed by the theory. In other words, the Soviet-model theory predicts not only that Arab air forces should have difficulty with air-to-air combat, but that really only those Arab air forces employing Soviet practices should manifest such inefficiencies. Consequently, Arab air forces that never rely on Soviet methods should have no such problems, Arab air forces that adopt Soviet practices should experience a corresponding drop in their air-to-air combat performance, and Arab air forces that abandon the Soviet model should experience a corresponding improvement in their air-to-air performance.<sup>1</sup> Any theory whose predictions are not fulfilled by both questions asked in this test cannot be considered to have much ability to explain Arab military effectiveness since 1945.

There are some exceptions to this rule. On a number of occasions, specific Arab militaries (or elements of Arab militaries) did not perform in the manner predicted by the Arab culture theory. In this chapter, I do not discuss six of these exceptions: the Syrian military in 1948, the Syrian commandos after 1973, The Iraqi Republican Guard after 1986, Iraq's Mirage F-1 pilots, Saudi Arabia's F-15 pilots, and the Jordanian Air Force 1966-1970. In addition, there are certain aspects of Iraqi military effectiveness 1987-1991, Egyptian military effectiveness in 1973, and Jordanian military effectiveness 1948-1967 that were anomalous and that I do not treat in this chapter. In each of these cases, I believe the reason for their exceptional behavior is that the influence of Arab culture was mitigated. Consequently, it would be improper to ask the Arab culture theory to predict the variance in these cases when, in fact, Arab culture appears to have been removed as an influence on them. Instead, I treat these exceptions in Chapter 13, where I assess whether Arab culture truly was mitigated in these instances, and then whether that variance produced the corresponding change in military effectiveness.<sup>2</sup>

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<sup>1</sup> In other words, although this test is essentially a competitive one in that it asks how well the different theories did in predicting actual Arab military experience compared to one another, one method of this competition is to ask how well each performed against the null hypothesis.

<sup>2</sup> As I noted in Chapter 2, for purposes of this study, I treat Arab culture as a constant both across time and across the region. For this reason, for the Arab culture theory to be confirmed by this test, the answer to the question of whether Arab military ineffectiveness varied with Arab culture must always be that there was no variance in Arab military effectiveness over time or across the region: all of the Arab militaries should show the same patterns of behavior at all times to conform to the predictions of the Arab culture theory.

## Creativity

At the strategic level, creativity and adaptability varied considerably over time.<sup>3</sup> On some occasions, Arab generals showed a superb ability to improvise solutions to unforeseen events or to develop novel approaches to a situation. Egyptian planning for the cross-canal offensive that began the October War showed an excellent capacity for creative thought, flexibility, and improvisation. Similarly, many Iraqi operations after 1986 also showed real creativity. For instance, the invasion of Kuwait employed armored forces attacking on two axes of advance--one a supporting attack designed to outflank enemy defenses at the Matlah pass to aid the movement of the main thrust--in concert with a heliborne envelopment and amphibious flanking assaults. This clearly was not a mindless frontal charge. Similarly, Syrian division commanders on the Golan in 1973 constantly redirected their forces in unplanned maneuvers to try to take advantage of unforeseen opportunities. Unfortunately for Damascus, their tactical units consistently proved incapable of effectively implementing these creative moves.

Nevertheless, not every Arab general demonstrated the same flair for innovation, and a number of Arab campaigns were directed in a simplistic, almost mindless fashion. For example, Iraqi strategic performance in 1948, 1973, and again in 1980-1982 was about as poor as imaginable. The Iraqis essentially conducted head-on offensives without any subtlety or subterfuge, and were mauled by much smaller, but more able, forces. Likewise, the conduct of the Egyptian and Syrian General Staffs in 1967 left much to be desired in terms of the flexibility and creativity of their planning and leadership. Egyptian and Syrian forces were deployed in a simple, straitforward manner and their actions were highly predictable.

In contrast to this wide fluctuation at the strategic level, a clear pattern emerges at tactical levels. Probably the most debilitating aspects of poor Arab military performance were the inability of Arab tactical forces to act creatively in battle and their rigid adherence to tactical doctrine. Arab militaries were consistently unable to adapt quickly to unforeseen events and were rarely able to improvise tactical solutions to unexpected problems. Arab junior officers frequently executed orders blindly, even when such orders were manifestly absurd, irrational, or suicidal. Arab combat units often adhered to tactical doctrine long after it had been demonstrated to be ineffective or dangerous. In virtually every war they fought, Arab tactical units were constantly defeated by enemy forces of equal or smaller size because the Arab units clung dogmatically to doctrine or orders from above and refused to act in response to the vicissitudes of combat. Largely because Arab junior officers refused to innovate, and responded poorly when provided only general guidelines from higher authorities, Arab ad hoc operations usually resulted in disaster. Arab armed forces were able to learn from their mistakes but never quickly, and usually only when the military high command made a determined effort to identify a problem, develop a solution and then integrate that solution into training for the next war.

This inflexibility and unwillingness to improvise in tactical engagements

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The only exceptions are the nine listed: Syrian in 1948, the Syrian commandos after 1973, the Iraqi Republican Guard after 1986, Iraqi Mirage pilots, Saudi F-15 pilots, the Jordanian Air Force 1966-1970, and to a lesser extent the Arab Legion 1948-1967, the Iraqi military after 1987, and the Egyptian military in 1973. However, in Chapter 13 I argue that these are exceptions that prove the rule because in these cases the effects of Arab culture appear to have been reduced or eliminated altogether.

<sup>3</sup> As a reminder to the reader, I generally consider the strategic level of command to be division commanders and above, while I consider tactical command to be brigade commanders and below. There is much ambiguity here and tactical vs. strategic levels fluctuate based on the size of the forces involved. In very large armies, such as the Iraqi Army after 1986, division commanders probably ought to be considered tactical commanders. On the other hand, in very small armies, such as the Jordanian Arab Legion of 1948, brigade and probably battalion commanders probably ought to be considered strategic-level commands. As noted in chapters 2 and 3, the key criterion is the number of such commands in an army. If there are only a small number of commands (less than one or two dozen) the level should be considered strategic, whereas if there are large numbers of such commands, the level should be considered tactical.

manifested itself in any number of ways and on any number of occasions. The recurrent pattern among Arab armies was that when an enemy had broken through its lines and was threatening to roll them up from the flank, the Arab units would fight tenaciously from their existing positions but could not or would not reform themselves into a new line to prevent their adversary from reducing their positions in detail. Egyptian forces in 1973 and Iraqi forces in 1988 and 1990-1991 fought well when executing the detailed orders they had learned by heart, but their field commanders were helpless when the scripted operations ran out. At that point, they usually could not even employ the methods they had been executing while they were following the General Staff's detailed orders. Syrian units on the Golan in 1967 and 1973, in Jordan in 1970, and in Lebanon in 1976 and 1982, regularly employed only the most simplistic approaches to tactical problems, even when these methods had long since been demonstrated as inappropriate or even counterproductive. With the exception of the 40th Armored Brigade and a handful of other units that fought in the Six-Day War, after 1956 Jordanian units almost invariably fought by conducting simple frontal assaults when attacking, or--on the defensive--by simply sitting in their positions and firing back at an attacker without making any effort to develop a creative response to the situation. As late as the Gulf War, Iraqi, Egyptian and Saudi tactical forces were incapable of improvising responses to unexpected battlefield developments, and Iraqi, Egyptian, and Syrian pilots have been described as simplistic and unimaginative by every foe they have faced.

This evidence strongly conforms to the predictions of the Arab-culture theory. Arab military forces have demonstrated very little creativity on the battlefield and this problem was greatest among the ranks of the junior officers, as predicted by the Arab-culture theory. In addition, these problems were a constant among Arab armies and air forces both across the region and throughout the period 1945-1991, also as predicted by the Arab culture theory.

These experiences offer some support for the commissarist theory, as they do suggest some difficulties with innovation among senior commanders. Moreover, these patterns showed some correlation with fluctuations in commissarism: whenever commissarism was heaviest (Iraq 1973-1980, Egypt 1967, Syria 1967) strategic creativity was non-existent, and whenever commissarism was modest (Egypt 1973, Iraq 1986-1991, even Syria in 1973) strategic creativity was reasonably good. However, problems of improvisation among junior officers were far more pervasive and extensive than those among the senior officers, contrary to the predictions of the commissarism theory. In addition, another problem for the commissarist theory is that Arab tactical officers virtually never showed any creativity. Even when clearly faced with unequivocal disaster, they made no effort to try to improvise a solution to their problem. This pattern fits the predictions of the Arab-culture theory extremely well, but contradicts the predictions of commissarism.

At face value, these conclusions seem to provide support for the Soviet system theory, which predicts inflexibility at tactical levels but much greater adaptability and improvisational skills at higher levels of command. However, in actuality they strongly disconfirm the Soviet-model theory because these predictions held true over time and across the Arab states regardless of whether or not they employed a Soviet system. Egyptian forces before and after the period of Soviet influence, Jordanian, Iraqi and Saudi forces all displayed exactly the same patterns of behavior as did Egyptian and Syrian forces relying heavily on Soviet methods.

### **Information Flows**

Arab militaries suffered from debilitating problems in the flow of information all along the chain of command. It has been the history of Arab armed forces that personnel throughout the military consistently exaggerated and often deliberately falsified reporting to higher echelons. Simultaneously, senior commanders routinely withheld information about operations from subordinate formations. These reinforcing tendencies created an

artificial fog in which Arab militaries were forced to operate. Lower echelons sent inaccurate reports to higher echelons who then made plans based on the misinformation. Since higher echelons rarely provided all available information to lower formations, many combat units had to execute operations with little knowledge of the enemy, the terrain, or the larger mission. The lower echelons then either had to try to execute the operation, which was often suicidal, or lie and report that they did perform the operation.

Historical examples of this tendency abound, but the manifestations of the problem during the first 36 hours of the Six-Day War--when the Egyptian air force refused to admit to Nasser or the army commanders that their planes had been destroyed and the Egyptian field commanders in Sinai refused to admit that they were being routed and instead claimed that they were pushing into the Negev--are the most striking. In every war the Egyptians fought, the constant manipulation, compartmentalization, fabrication, and distortion of information was a major hindrance. Jordan experienced the same problems in most of its wars, with the worst problems arising during the Six-Day War when reports coming back from Amman's forces were so twisted that the King and the high command had little understanding of what was actually happening and ordered a retreat based on wildly exaggerated accounts of Israeli strength. During Operation Desert Storm, the Coalition high command found it necessary to have US military personnel watch the Saudi, Egyptian, and Syrian elements of the multinational coalition to ensure that they were reporting accurately on events in their sector.

This evidence conforms to the predictions of the Arab-culture and commissarism theories, but clashes with those of the praetorianism theory. The Arab culture theory successfully predicted that Arab militaries would experience debilitating problems with information management, especially up and down the chain of command, and that these problems would be a virtual constant throughout the Arab world from 1945 to 1991. Indeed, the historical evidence provides more than mere correlation with the Arab-culture theory, as after the Six-Day war, the Egyptians and the Jordanians explicitly concluded that the origin of this problem lay in Arab culture and its emphasis on avoiding shame. The evidence generally conforms to the predictions of commissarism. However, this pattern of behavior was a constant and did not show significant fluctuation with the changes in commissarism among Arab militaries, which is a very strong knock against the commissarist theory. Praetorianism fared even worse. First, the evidence does not fulfill the predictions of the praetorian theory since praetorianism predicted that information would be manipulated along factional lines with excellent flows within a faction, and awful flows between factions, yet the evidence indicated that manipulation of information instead was a pervasive problem across the board, and was most problematic up and down the chain of command. In addition, Arab military problems with information persisted without much change long after praetorianism had ceased to be a major influence on Arab militaries. The praetorian theory predicts that after about 1970, when commissarism effectively displaced praetorianism in most of the Middle East, these information problems should have abated or disappeared altogether.

### **Initiative**

Initiative was found in the same patterns as creativity among Arab military officers. Arab generals showed no particular pattern one way or the other in terms of demonstrating independent thought and action or aggressive leadership. In some cases, Arab senior officers performed extremely well on this count. Iraq's General Mahmud during the Gulf War; Egypt's Generals Mwawi in 1948, Riyad in 1967 (Jordanian carping notwithstanding), and Isma'il in 1973; all of the Syrian division commanders in 1973; and Jordan's senior military leaders in 1970 all were responsive, aggressive and willing to seize fleeting battlefield opportunities to try to secure victory. However, there were also a fair number of Arab generals notable for their timidity, indecisiveness, and talent for letting golden opportunities slip away. For example, Iraqi air and ground commanders throughout the first half of the Iran-Iraq War showed almost no aggressiveness and no

ability to think or act independently, while they squandered any number of chances to crush the Iranians. Similarly, Egypt's division commanders in 1967 displayed so little initiative that, for instance, General Shazli would not even execute his planned counterattack in support of Abu Ageilah without explicit orders from the General Staff and instead simply allowed this crucial position to fall to the Israelis without lifting a finger.

In contrast to this wide variance at senior officer levels, Arab militaries have consistently been crippled by a lack of independent initiative among their junior officers. Arab tactical commanders regularly failed to take advantage of opportunities in battle. Unless specific orders were issued authorizing a particular operation, Arab units would not perform the activity. All too often, Arab units remained entirely passive for lack of orders, even when action might have staved off defeat. Because no one at lower levels would move without orders from a higher echelon, Arab armies tended not to respond to unexpected developments until information had been passed up the chain of command for a decision and a decision had been passed back down in the form of orders. Spontaneity was almost entirely alien to Arab military operations. Moreover, it was commonplace for even the most minor issues to be referred up the chain of command, overburdening the top leaders and further slowing reaction times.

Examples of the absence of tactical initiative have been most spectacular in the Syrian military. Probably the most damaging instance of a systematic failure by Arab tactical commanders to show initiative was the failure of Syria's armored and mechanized brigades to seize the Jordan river bridges on 7 June 1973. Likewise, in 1967 the Syrian defense of the Golan collapsed because tactical commanders made no effort to mount counterattacks against the Israelis. In 1982, Syrian pilots severed from their ground controllers were so incapable of independent action that they simply flew figure-eights until the Israelis shot them down because they would not attempt to flee or fight on their own.

These patterns were the rule throughout the Arab world. In the Gulf War, Saudi and Egyptian forces proved incapable of rapidly exploiting the collapse of Iraq's frontline defenses and advanced so slowly that they worried the US Marine divisions operating between them. Egyptian forces in 1956 and 1967, Jordanian forces in 1967, and Iraqi forces in 1980-1982 regularly failed to counterattack to block or seal enemy penetrations of their positions, nor would they even take the initiative to get out of their positions and reorient their defenses to confront a flanking attack or envelopment. During the invasion of Iran in 1980, Iraqi units showed so little aggressiveness that after defeating the weak Iranian resistance in western Khuzhestan, they failed to exploit eastward to seize the critical--and undefended--roads linking Ahvaz, Dezful, Khorramshahr or the mountain passes between Khuzhestan and the rest of Iran. Iraqi units consistently failed to pursue and finish off defeated Iranian forces, allowing them to regroup and return to battle. These failures were disastrous as they allowed the Iranians to reinforce and resupply their units in Khuzhestan and halt the Iraqi advance.

This evidence strongly supports the Arab-culture theory, which predicts that tactical commanders should demonstrate little initiative, aggressiveness, or independent action. Moreover, as with creativity, the absence of tactical initiative was essentially a constant among Arab militaries throughout the period 1945-1991. On the other hand, the Soviet-model theory again failed completely because, although Arab armies did show little tactical initiative and somewhat better strategic initiative (as predicted by the Soviet-model theory) there was no discernible difference in patterns of initiative between Arab armed forces relying on Soviet practices and those that did not.

The evidence also does not conform to the predictions of the commissarist theory. First, commissarism predicts considerably greater problems with passivity and timidity at higher levels of command than at lower levels, when in fact the opposite proved to be the case. In addition, the sub-predictions of the commissarist variant generally were not borne out by the available evidence. Specifically, since the commissarist model posits



that officers will avoid taking the initiative for fear of the punishment that would accompany either excessive success or failure, then commissarist officers should act passively only when doing so will not result in catastrophe. Moreover, it predicts that commanders will order counterattacks when not doing so would likely result in a disaster that would then lead to their execution. Thus the failure of Arab commanders at all levels to order counterattacks or take other actions to try to stave off catastrophic defeat contradicts the sub-predictions of this theory. Another sub-prediction contradicted by the evidence is that Arab enlisted personnel would show initiative whenever the chain of command broke down (thereby freeing them of the control of their officers) or when their officers tried to make them do something they did not want to. Instances of either phenomena were exceedingly rare in the Arab world. Instead, whenever the chain of command broke down, Arab enlisted men did nothing--as they did whenever they had no direct orders--and whenever ordered to do something--no matter how dangerous or foolish--they did it. This pattern fits the sub-predictions of the Arab-culture theory, but contradicts those of commissarism.

### **Centralization of Authority**

As the flip-side to the ubiquitous passivity at junior levels, Arab militaries consistently concentrated decision-making at the highest levels of command. Senior officers were unwilling to delegate authority to subordinates. The excessively centralized structure also limited cooperation and communication between units. Nearly all such interaction was conducted through the superior formation, delaying the process and creating the potential for greater problems as information was distorted by the process of communicating via another command entity.

Perhaps the most striking example of this kind of behavior was the Egyptian order during the first 12 hours of the October War that specifically forbid any junior officer from taking any action that diverged from the script of the cross-canal invasion. The unwillingness of Jordanian formations at all levels (except the 40th Armored Brigade and a few other units) in 1967 to make any move without first clearing it with the Western Front commander if not the General Staff itself, also attests to this patterns. So too does the ever-increasing micro-management of Iraqi operations by the Iraqi General Staff during the latter half of the Iran-Iraq War.

This historical evidence strongly supports the conclusions of the Arab-culture theory but provides lesser support for the commissarist theory. Arab militaries consistently overcentralized their command and control arrangements, as predicted by the Arab culture theory, and this was a constant across the Arab world throughout the period 1945-1991. On the other hand, although the commissarist variant of politicization also predicted a strong tendency toward overcentralization, its prediction that this overcentralization should correlate with the fluctuations in commissarist politicization inflicted on Arab militaries was not borne out by the evidence.

Interestingly, the historical experience of the Arabs regarding centralization of command also appears to fulfill the predictions of the Soviet-model theory to a certain extent, although not in the way suggested by proponents of this theory. First, the Soviet-model theory did accurately predict that Arab militaries should tend to overcentralize their chains of command. The fact that nearly identical patterns of behavior were evinced by Arab militaries relying on Soviet systems and by those not relying on Soviet systems does contradict the predictions of the Soviet-system theory. However, there is reason to believe that reliance on Soviet methods actually proved useful to some Arab armies in this area. Specifically, the Egyptians, Syrians and Iraqis may have learned to script their offensives from the Soviets, leading to the initial Arab successes of the October War, and Iraq's eventual victory over Iran and its conquest of Kuwait. Although there is no direct evidence to support this contention, it is the case that the Egyptians and Syrians began scripting their military operations only after they more fully embraced the Soviet-style of war. While the Iraqis did not begin scripting their military operations until long after

they had ended any significant involvement with the Soviets, they did have ties to the Egyptians and it is possible that this was a practice they learned from Cairo. Arab military operations were scripted to a much greater extent than were typical of Soviet operations, however, this may simply have been an Arab adaptation of Soviet methods to their own unique strengths and weaknesses. In short, the evidence is all circumstantial, nonetheless, it seems plausible that relying on Soviet practices actually proved useful to the Arabs in this area.

### **Command and Control Arrangements**

Although the patterns of behavior are not quite so striking as in the above categories, it is still largely the case that Arab armed forces suffered from bizarre, convoluted and otherwise distorted chains of command. Several of the Arab militaries had fewer high-level headquarters formations than was desirable given the size of the tactical formations under their control. By contrast, many of these same armed forces had bloated command staffs with excessive numbers of personnel at the very highest echelons. Overlapping and ambiguous commands paralyzed formations in the field, making it difficult for them to act at all, let alone coordinate their actions with other units in larger operations.

The Saudi armed forces were crippled both by the dual command structures for the Royal Saudi Land Forces (which ran up to the Defense Minister, Prince Sultan) and the Saudi Arabian National Guard (which ran through separate channels up to Crown Prince Abdallah), and by the ability of royal princes throughout the military to circumvent conventional chains of command and employ their family networks to get what they wanted. Both the Syrian and Jordanian regimes initially refused to allow the creation of division or corps headquarters, specifically because they feared that these powerful field commands would become springboards from which ambitious generals could try to overthrow the government. In all their wars up to the 1973 campaign, Egyptian forces suffered because they had no intermediate command between division and theater headquarters. Moreover, in 1967, Amer's sudden changes in the Egyptian chain of command played some role (albeit less than often claimed) in the panic and paralysis that gripped the Egyptian hierarchy during the Israeli offensive. The Syrian command structure employed a Byzantine system by which many Sunni Arabs occupying senior command slots had no power and instead authority was actually wielded by an Alawi deputy.

These patterns strongly confirm the predictions of the commissariat variant of the politicization theory. Moreover, the complexity, ambiguity, and duplication of command and control arrangements clearly rose and fell along with fluctuations in the presence of commissariat politicization among the Arab militaries. Moreover, the fact that the Syrian, Jordanian, and Saudi problems were deliberate efforts to prevent a military coup reveal them to be quintessentially commissariat actions.<sup>4</sup>

### **Use of Maneuver**

Arab generals displayed an uneven ability to employ maneuver in combat as a tool for achieving victory. For the most part, the better Arab generals did well in setting up flanking attacks against enemy lines, enveloping enemy positions, and generally using movement to place their enemies at a disadvantage either in terms of terrain, time, or spatial arrangements. For example, the Syrian plan to penetrate the Israeli Golan fortified lines and then smash their entire defensive system in a series of interlocking envelopments in 1973 was a very sophisticated plan. Likewise, the Egyptian Ramadan and Haradh offensives in Yemen employed schemes of maneuver that even grizzled

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<sup>4</sup> I remind the reader that actions taken by the regime to forestall a military coup fall into the realm of commissariatism, not praetorianism which is the problems created when the military takes over the government or otherwise intervenes in domestic affairs.

*Wehrmacht* or Red Army generals would have admired. The Iraqis, however, probably demonstrated the best grasp of operational-level maneuver both in the latter half of the Iran-Iraq War and the invasion of Kuwait. Against Iran and Kuwait, Iraqi forces conducted crisp armored thrusts that outflanked and enveloped their enemies' major defensive positions, resulting in quick, decisive victories.

On the other hand, the poorer Arab generals mostly conducted predictable straight-ahead attacks and unimaginative straitforward defenses. Egyptian and Iraqi operations in 1948 were essentially just mindless charges into Israel. Worse still was the performance of Iraqi generals during the initial invasion of Iran, who made no effort whatsoever to use their mechanized formations in deep thrusts to cut-off the small number of Iranian military units in Khuzhestan and seal the various entry points from the rest of Iran. On defense, the Iraqis were no better: they defended forward with everything they had, and on those rare occasions when they attempted to counterattack an Iranian penetration it was invariably a cumbersome frontal assault which even the disorganized and poorly-armed Iranians could defeat.

At the tactical level, a much clearer pattern of performance emerged. Arab tactical units rarely attempted to gain an advantage over an adversary by actively maneuvering on the battlefield. Consistently, Arab combat units on the defensive stayed in their prepared positions and relied on firepower to defeat an attacker. When attacking, Arab armies likewise tended to rely solely on firepower and mass, employing either battering-ram tactics to simply overwhelm a defender or stand-off tactics in which they attempted to obliterate defensive strongpoints by calling in massive fire support before advancing.

Examples of these tendencies abound. With regard to offensive operations, the Iraqi invasion of Iran in 1980; their campaigns against the Kurds throughout the 1960s and 1970s; The Iraqi attacks against the Israeli lines in southern Syria during the October War; the Egyptian offensives in Yemen; the major Egyptian assault on 14 October 1973, as well as their attack against the Iraqis as part of Operation Desert Storm; The Egyptian and Iraqi attacks on Israel in 1948; the Syrian offensives against Israel in 1973, against Jordan in 1970, and against Lebanon in 1976; and the Saudi offensives both against R'as al-Khafji and the Iraqi positions in Kuwait during the Gulf War were all conducted in this fashion. Indeed, at a tactical level, these various attacks are so similar as to be almost indistinguishable. On the defensive side of the ledger, Jordan's stand on the West Bank in 1967; at Karamah, as-Samu, and Qalqilyah before and after the Six-Day War; and in northern Jordan in 1970; Egypt's defense of Sinai in 1956, and again in 1967; as well as their defense of the Negev in 1948; Syria's defense of the Golan in 1967; and, their defense of the Bekaa valley in 1982; Iraq's defense of northern Samaria in 1948, of Khuzhestan in 1980-82, and their defense of Iraq itself during 1982-1987 all displayed the same inattention to tactical maneuver as an element of defensive operations.

These findings strongly confirm the predictions of the Arab-culture theory. This absence of maneuver, especially at tactical levels fulfills an important predictions of the Arab culture theory. Likewise, this pattern remained a constant both across the Arab world and throughout the period 1945-1991. On the other hand, the evidence again provides only qualified support for the commissarist variant of politicization of the military. First, the patterns of poor performance are much stronger at tactical levels than at strategic levels, instead of the other way around as the commissarist model predicts. Another important blow to the commissarist theory is that at tactical levels, the fact that this pattern was a virtual constant--without any discernible fluctuations corresponding to variations in the influence of commissarism clearly contradicts the predictions of the commissarist theory. However, at strategic levels, there is a much stronger correlation: Arab armies were far more likely to employ maneuver at strategic levels when they suffered from relatively little commissarism and so had more competent generals in command. In the case of the palace-guard theory the general absence of maneuver from Arab military operations conforms to its predictions, but both theory fails to predict the

consistency of this pattern. Specifically, since the absence of maneuver at tactical levels remains constant regardless of the extent to which Arab militaries focus on internal or external threats, these findings strongly contradict the predictions of the theory. Finally, the evidence flat out fails to fulfill the predictions of the Soviet model, which in direct contradiction to the actual experience of the Arab militaries, asserted that Arab armed forces would demonstrate a constant *emphasis* on the employment of maneuver in battle.

### **Employment of Armor**

Arab armies handled tanks in a rote, dogmatic fashion that was not altered to suit the given situation. In a manner similar to their problems with tactical maneuver, Arab armies were rarely able to employ their armored forces with a great deal of effectiveness. Arab armies generally employed tanks like battering rams or mobile, direct-fire artillery and rarely took advantage of the full range of capabilities of modern armor. In tank duels, Arab crews mostly showed poor marksmanship, they rarely attempted to maneuver to get a better shot--or to prevent their opponent from doing so--nor did they generally even try to "stalk" enemy tanks. In an attack, Arab tanks generally just charged forward with guns blazing, and when defending, Arab tanks usually found a hull-down position and remained in it until the enemy retreated or they were destroyed. Even some of the better Arab armored formations failed to change firing positions in battle to prevent their enemy from zeroing in on them.

With the exception of the 40th Armored Brigade in the Six-Day War, Jordanian tank formations on the West Bank in 1967, at Karamah in 1968, and in the Vale of Ramtha in 1970 all sat passively in their defensive positions and attempted to mostly outgun their adversaries. Even in 1973, the 40th Armored Brigade's tank crews fought better than most Arab tank crews but not well enough to seriously damage smaller Israeli formations. Moreover, the Jordanian tanks proved incapable of working together to mount either a credible defense or else to counterattack the Israelis. Syrian and Iraqi tank tactics have been uniformly dismal, although the sheer incompetence of the massive Syrian armored formations assaulting Red Ridge in 1973 stands out as exceptional even by Syrian standards. The performance of Egyptian armor has been little better, with their pathetic efforts on 14 October as a case in point.

In this area, the historical evidence conforms closely to the predictions of both the Arab-culture and underdevelopment theories. Both theories accurately predict that Arab armies will have great difficulty employing armor in battle and will fail to take full advantage of the equipment in their hands. However, the predictions of the Arab culture theory are fulfilled somewhat better than those of the underdevelopment theory because Arab tank-handling remains almost a perfect constant--as predicted by the Arab culture theory--and does not show a steady gradual improvement as predicted by the underdevelopment theory to conform to the steady gradual increase in Arab socio-economic levels between 1945 and 1991.

On the other hand, the evidence disconfirms the predictions of both the palace guard and Soviet-model theories. Both theories successfully predict that Arab armies will have difficulty handling tanks, but cannot predict the constancy of this problem. Arab militaries continued to handle tanks extremely poorly long after palace guardism had faded and their armies were making determined efforts to try to improve their capabilities to fight other conventional armies. Likewise, the consistency of this pattern of poor performance across the Arab world to include armies that did not rely on Soviet practices is a further blow to the Soviet-system theory. Indeed, Iraqi forces appear to have gotten worse at handling their armor as they gradually shed Soviet practices, contrary to the predictions of the theory. In 1973, when Iraqi doctrine was most closely modeled on Soviet methods, Iraqi armored units at least charged forward. However, by the invasion of Iran in 1980, after a fairly extensive purging of Soviet doctrine, the Iraqis generally used their tanks as little more than movable pill-boxes or armored artillery pieces. In addition, the constant deployment of armor in poor terrain, particularly urban

environments, directly contradicted Soviet armor doctrine, which stressed the bypassing of built-up areas by armored forces.

### **Employment of Artillery**

Arab artillery operations were scarcely better than their armor operations, and sometimes even worse. Arab artillery units had great difficulty employing their fire flexibly, especially in support of operations on a fluid battlefield. Arab artillery units only were able to deliver accurate, reliable fire when operating based on fixed, pre-registered fire missions. They proved incapable of rapidly and accurately shifting fire, conducting counter-battery fire, concentrating fire from geographically separate batteries, or providing on-call fire support in a timely or accurate fashion. Eventually, Arab artillery corps began to plan their operations around these deficiencies, making little or no allowance for on-call fire support, counter-battery fire, or fire against targets of opportunity. As a result of these problems, when Arab forces became involved in a fluid battle--and were most in need of fire support--their artillery was incapable of delivering.

One of the most egregious examples of the ineptness of Arab artillery operations was the performance of Iraqi batteries in the October War, which may have caused more damage to their Jordanian and Syrian allies than to their Israeli opponents. The unwillingness and then inability of Syrian artillery to shift their fire onto Israeli forces assaulting the Golan in 1967, as well as Iraq's Republican Guard artillery obliterating 55-gallon drums while leaving the American forces untouched during the Gulf War, also stand out in this category. Even setting aside these exceptionally bad cases, Arab artillery formations were remarkably inept and provided very little support to the maneuver units locked in combat. Jordanian artillery in 1967; Syrian artillery in 1967, 1973, 1976, and 1982; Egyptian artillery in every single war they fought; and Iraqi artillery in all of their wars as well, simply could not shift fire, provide accurate on-call fire support, counterbattery fire, or conduct other precision fire missions. Saudi artillery performed equally poorly in the Gulf War, but fortunately for Riyadh, its field forces were mostly able to rely on air and fire support from nearby US units.

In every case, Arab artillery could deliver a devastating preliminary bombardment if given plenty of time to plan and pre-register their guns, but the moment the course of battle took their forces beyond their starting positions, Arab artillery could do little. The only exception to this rule was the Syrian and Egyptian forces in the first few days of the October War, and the Iraqi forces in their 1988-1990 offensives. In these instances, the Arabs were able to adhere to elaborately detailed battle plans that included pre-determined and pre-targeted artillery missions. The proof that these incidents were not exceptions to the rule was the performance of Syrian, Egyptian, and Iraqi artillery the moment operations diverged from planning: in every case, their artillery suddenly began falling on empty ground and could not accommodate itself to the changed circumstances.

As with armored operations, the consistent problems experienced by Arab artillery forces supports both the Arab-culture and underdevelopment theories. The historical experience of Arab artillery corps fulfills the predictions of the Arab-culture and underdevelopment theories. Likewise, the constancy of this behavior also conforms to the predictions of both theories, although the underdevelopment theory actually predicted a slow, modest increase in Arab artillery capabilities rather than the virtual flat line that actually was the case. Once again, the patterns superficially conform to the expected behavior of palace guard militaries and Soviet-style militaries, but because these patterns remain constant regardless of the degree to which any of the Arab armies were "palace guards" or relied on Soviet practices, they ultimately disconfirm the predictions of both theories.

### **Air-to-Air Combat Skills**

For the most part, Arab fighter pilots demonstrated consistently poor dogfighting skills and fared very badly in equally-matched air-to-air engagements. Indeed, Arab air

units frequently have been defeated by far smaller but more competent adversaries. Even with less skillful opponents, Arab air forces have only been able to prevail in aerial combat when they held a significant advantage in numbers. Arab pilots were mostly timid and unimaginative dogfighters who relied on simplistic tactics. Arab pilots often could not react to unexpected moves by their adversaries and kept doing what they had been doing long after their opponents had learned how to defeat them. Arab pilots rarely were able to take full advantage of their equipment and, beginning in about 1970, were heavily reliant on ground controlled intercept (GCI) guidance.

Arab problems with air-to-air combat probably reached their nadir with the appalling performance of the Syrian Air Force in the 1982 air battles with Israel over Lebanon. However, Arab performance in air-to-air combat in their other wars was little better. The IAF achieved a kill ratio against the Arabs of 10:1 in 1967, 20:1 during the War of Attrition, and 20 or 30:1 in 1973, in addition to 86:0 in 1982.<sup>5</sup> Iraqi pilots fared no better against Iranian or American fighters in their wars. Indeed, despite their numerical advantage and the deplorable state of the Iranian air force, the Iraqis were not able to gain any measure of air superiority until 1983 when Iran's inability to get spare parts for its US-made aircraft reduced the number of operational fighters Tehran could get airborne to less than 100.<sup>6</sup>

This general pattern of poor performance fits the predictions of the Arab-culture theory best of all, fulfilling the theory's predictions that Arab air forces would have great difficulty in dogfights, as well as conforming to the theory's prediction that this pattern would remain virtually constant across the Arab world throughout the postwar era. These findings conform to the predictions of the underdevelopment theory next best, fulfilling the theory's prediction of poor Arab air-to-air combat performance, but failing to some degree to show the slight increase in performance over time predicted by the theory. Although commissarism accurately predicts the pattern of poor performance, the evidence does not show variance that corresponds with the fluctuations of commissarism among the Arab militaries between 1945 and 1991. Similarly, these findings do not support the palace guard theory because the patterns remain constant for the Arab states regardless of the degree to which their militaries concentrated on external vice internal security missions. The evidence offers some support for the Soviet-model theory. Specifically, the Syrian, Egyptian and Iraqi air forces all began to rely heavily on Soviet-style GCI direction beginning in the early 1970s. The poor showing of Syrian fighters in 1982 and Iraqi fighters in 1991 in part can be traced to problems that arose when the GCI links were jammed or otherwise disrupted by their adversary. Nevertheless, the utter helplessness of Iraqi and Syrian pilots without GCI guidance speaks volumes about the limited skills of their pilots and the system in which they functioned. Moreover, Iraqi and Syrian performance in these two wars was worse than that of other Arab air forces, but not by that much, indicating that GCI dependence was not the major problem afflicting Arab air forces. Thus, the evidence indicates that relying on Soviet-style GCI direction was harmful, but not decisively so.

### **Air-to-Ground Operations**

The performance of Arab air forces in air-to-ground missions was at least as bad, if not worse, than their performance in air-to-air combat. At the most basic level, Arab airstrikes could not put ordnance on their targets. Arab airstrikes were inadequately reconnoitered, often haphazardly planned, simplistic, and dangerous. Arab pilots showed

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<sup>5</sup> These figures are drawn from Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), pp. 86; Col. Trevor N. Dupuy, *Elusive Victory*, Third Edition--Paperback Edition, (Dubuque, IA: Kendall Hunt, 1992), p. 554.

<sup>6</sup> There are two important exceptions to this otherwise well-supported rule: the F-15 pilots of the Royal Saudi Air Force and the Royal Jordanian Air Force (RJAF). Both of these exceptions are discussed in Chapter 13 below.

little or no ability to make last minute adjustments to bring their weapons on target, and were incapable of adapting to unforeseen developments. Arab pilots also did not employ any independent judgment as to the value of different targets, rigidly attacking only those they were ordered to while leaving much higher value targets untouched. Arab air forces failed to send adequate sorties against most target sets to actually destroy or suppress them, nor did they conduct post-strike reconnaissance to know whether the target had been destroyed. Arab close air support missions were mostly worthless, taking too long to approve, plan and execute to be of benefit, remaining under the control of the air force high command rather than the local ground commander, and failing to hit much of anything on the ground.

Any number of examples of these problems are to be found in Arab military history since 1945. Probably the most pathetic of all Arab air campaigns was the Iraqi preemptive attack against Iran in 1980. For the rest of the Iran-Iraq War, the Iraqi Air Force had little to contribute to the ground fighting, and even when Baghdad committed the Iraqi Air Force in strength it made little impact on the course of key ground battles such as at al-Faw in 1986 and al-Basrah in 1987. Iraqi air efforts against the Kurds in the 1960s and 1970s, and against Kuwait in 1990 were little better. Egyptian airstrikes against Israeli ground forces in 1948, 1956, 1967-1970, and 1973, and against the Yemeni Royalists in the 1960s, were very poor and, with only a few minor exceptions, had no effect on the course of the ground operations. Saudi air-to-ground operations failed to achieve anywhere near the same skill levels as the air-to-air operations of their F-15s. The Syrian, Iraqi, and Jordanian airstrikes against Israel on the first day of the Six-Day War were remarkably inept: most of the strike packages could not find the right target, and none of them were able to cause significant damage to whatever they attacked. Similarly, Syrian air-to-ground operations at the start of the October War and throughout their Lebanese campaigns were distinguished by being fairly well planned, but still did little because they were so poorly executed. Indeed, even when an Arab air force attempted to provide precise instructions to a pilot to obviate the need for the pilot to demonstrate any real ability--as the Syrians did in 1973--their bombs still failed to have any appreciable effect on their targets.<sup>7</sup>

At the most superficial level, this evidence conforms closely to the predictions of the Arab-culture, commissarist, palace-guard, Soviet-model, and underdevelopment theories. The constancy of this pattern, however, best fulfills the predictions of the Arab culture theory, and to a lesser extent the underdevelopment theory. On the other hand, the fact that Arab air-to-ground operations did not vary in their competence in correlation with changes in the degree of commissarist politicization, contradicts an important prediction of the commissarist theory. Likewise, it fails to conform to the predictions of the Soviet-system theory because Arab air forces experienced the same problems regardless of whether or not they relied on Soviet methods. Finally, palace guardism does not adequately explain these patterns because the Arab air forces manifested these same problems regardless of the extent to which they fit the profile of a palace guard.

### **Ad-Hoc Operations**

As suggested by the discussions of initiative and improvisation above, Arab military forces consistently had difficulty executing operations for which they have not had extensive training and had not received detailed orders specifying the precise actions they were to undertake. Arab junior officers who found themselves in unexpected situations displayed an inability to adapt to the changed circumstances. They were unwilling to improvise responses, attempting instead to implement hackneyed tactics, and

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<sup>7</sup> In this case as well there are two exceptions to the general rule of abysmal Arab air-to-ground operations: the Royal Jordanian Air Force attacks against Syrian armor in 1970 and the Iraqi Mirage F-1 missions against Iranian oil export facilities during the Iran-Iraq war. Both of these exceptions are discussed in Chapter 13 below.



this they did poorly. More often than not, they did not act at all for fear of doing something wrong, preferring to wait for orders than to shoulder the responsibility for acting themselves. As a result, Arab armies performed extremely poorly on fluid battlefields. Their offensives invariably failed badly unless they were meticulously pre-planned set-piece operations. Arab armies fought much better on the defensive, but even then they often collapsed when an attacker was able to disrupt the integrity of their defenses and force them to react to unexpected developments. Indeed, many of the best Arab generals recognized this problem and so consciously structured their war plans for well-planned, limited objective operations in an effort to avoid the need to fight fluid, flexible engagements.

The best examples of these problems were the various instances when Arab set-piece offensives broke down, leaving the Arabs to try to ad hoc the rest of the operation. The Egyptians and Syrians in 1973, and the Iraqis on occasion in 1988 had plans go awry and were forced to diverge from their set-piece actions. In every instance, Arab operations that had been moving swiftly and seamlessly with excellent use of maneuver and combined arms integration suddenly fell apart and the Arabs could not do what they had been doing just days or hours before. In an even more specific example of this phenomenon, on 6 October 1973, the Syrian 9th Infantry Division fought very well and broke through the Israeli lines while following the Syrian invasion blueprint, but when Colonel Turkmani sent his 43rd Mechanized Brigade off to exploit an unexpected opportunity, the brigade was incapable of performing this mission and was stopped by a tiny Israeli force. The results have been the same on the defensive, as Iraqi forces were incapable of doing anything but defending in place and could not ad hoc effective responses to unexpected Iranian moves throughout their eight-year war. Saudi forces during Operation Desert Storm showed a constant inability to execute unplanned operations quickly or effectively (for example, at Khafji), or even to advance the timetable of pre-planned actions. Possibly the most effective ad hoc reaction of an Arab army may have been Iraq's repositioning of five Republican Guard divisions to form a shield against the onrushing US VII Corps during the Gulf War, which served its purpose but was still a clumsy and stilted operation.

This evidence strongly supports the hypotheses of the Arab-culture theory. As the Arab-culture theory predicts, Arab forces had tremendous difficulty conducting other than set-piece operations and responding to unforeseen developments. Moreover, this pattern held constant for all of the Arab militaries throughout the postwar period. The evidence conforms only moderately well to the predictions of the commissarist theory since some Arab senior commanders demonstrated problems with ad hoc operations, but the problem was overwhelmingly concentrated at junior officer levels, contradicting the predictions of the theory. Moreover, once again the commissarist theory failed to predict the consistency of this experience. The evidence fails entirely to fulfill the predictions of the palace-guard theory because Arab armies continued to experience these same problems long after they had begun to seriously focus their efforts on defeating foreign adversaries and had dispensed with internal security missions to a significant extent. These findings also are difficult to square with the predictions of the Soviet-system theory for two reasons. First, the Soviet-system theory predicts that Arab tactical commanders would not attempt unplanned operations on their own initiative, but would do fine when ordered to deviate from a set plan and conduct an ad hoc operation by senior authority. While Arab tactical commanders only rarely attempted unplanned operations, as predicted, they performed very poorly when they were ordered by higher authority to conduct an ad hoc operation, counter to the theory. Second, as with so many of the other predictions of this theory, while the Arabs have generally performed as the Soviet theory predicted, this was true equally for Arab armies relying on Soviet methods as it was for those that did not.



### Set-Piece Operations

Arab set-piece operations were considerably better than their ad hoc operations, but were far from perfect. In general, Arab forces performed adequately when conducting thoroughly planned and extensively rehearsed operations. On some occasions, such as the Egyptian Ramadan offensive in Yemen, their assault across Suez in 1973, and the Iraqi offensives against Iran in 1988 and Kuwait in 1990, Arab armies did quite well in set-piece offensives. In other instances, such as Jordan's Operation Tariq, the Syrian assault on the Golan in 1973, and the Syrian offensives against the Lebanese Leftists in the fall of 1976, they did less well.

The quality of the planning of these set-piece operations was heavily dependent on the quality of the senior military leadership. In those instances when capable generals were in command, the Arab offensives were very well-planned. Perhaps the best examples of this were the Iraqi offensives in 1988 and 1990. Under the direction of Husayn Rashid, perhaps the finest Arab general of the postwar era, the Iraqi General Staff put together six superb corps-level offensives, the plans for which considered every aspect of the operation from logistics to strategy to every element of combat support. On the other hand, even eight years before, when the Iraqi General Staff was run by sycophants and half-wits, the planning for the invasion of Iran was abysmal on every count.

The execution of these operations was much better than in unplanned operations but still left much to be desired. Ultimately, the more detailed the planning (and the more competent the staff who did the planning) and the more extensive the plans were practiced, the better the operation was carried out. For instance, Iraqi operations consistently improved during the Iran-Iraq War as more competent leaders came to the fore and these generals increasingly scripted the details of operations orders. They improved further still when Iraqi forces were able to practice them so extensively that they could learn their roles by heart. The best executed Arab set-piece offensives were the most comprehensively planned and the most repetitively practiced: the Egyptian offensive of 1973 and the Iraqi offensives of 1988 and 1990. Performance generally tended to break down when operations were not planned down to the last detail and rehearsed to the point of memorization, and therefore required even modest amounts of independent leadership on the parts of Arab junior officers. This was the case for Syrian forces on the Golan in 1967 and 1973, Egyptian forces in Sinai in 1967, and every Arab preemptive airstrike.

This evidence fulfills only the predictions of the Arab-culture theory, which predicts that Arab forces would perform better in set-piece operations than in ad hoc operations, but that they would still be hindered by various problems of tactical execution. The evidence also shows a constant pattern among all of the Arab armies throughout the period 1945-1991, fulfilling another crucial prediction of the Arab-culture theory. On the other hand, the evidence contradicts the predictions of both commissarism and palace guardism, both of which predict that Arab set-piece operations should be as bad or worse than their ad hoc operations. Indeed, to the extent that Arab set-piece operations failed it was because of the poor execution of their tactical units, not the because of poor planning by the strategic leadership, findings that further run counter to the sub-predictions of both commissarism and praetorianism. Finally, the Soviet-system theory must also get some credit in this category. The Soviet theory predicts that Arab set-piece operations would be quite good because Soviet set-piece operations were generally pretty good. Although the correlation between reliance on Soviet methods and improved performance in set-piece operations is not perfect, it is not entirely spurious either. Specifically, the Syrians and Egyptians both did better in 1973 with their set-piece offensives than they did in 1967 with their set-piece defenses. It is also worth noting that the Egyptians actually did worse in 1991 than they did in 1973, and this correlates with

more than a decade of conscious efforts to dispense with Soviet practices.<sup>8</sup> Although the Iraqis had long abandoned Soviet methods by 1988, as noted previously, they may have learned to script their offensives--an important part of their success in the set-piece offensives of 1988 and 1990--from the Egyptians who probably learned it from the Soviets. Thus, the Soviet influence may also have helped the Iraqis indirectly.

### **Combined Arms**

Arab armies generally displayed extremely poor combined arms cooperation. For the most part, this problem was a failing of the junior officers, most of whom had no idea how to make combined arms operations work even if they did recognize the need for the different combat arms to operate in unison. At strategic levels, there were some Arab commanders who displayed a good grasp of combined arms warfare, and when they were able to plan and prepare their forces beforehand they were often able to get their troops to properly integrate their operations. For example, Egypt's General Mwawi in 1948, Jordan's al-Jazi in 1967, the Egyptian and Syrian General Staffs in 1973, and the Iraqi General Staff after about 1986 all did very well in squeezing combined arms coordination out of their forces whenever they had the time to plan, rehearse, and otherwise prepare for a battle.

By contrast, whenever these same commanders were forced to send their troops into combat without such preparation, combined arms integration was virtually nonexistent. Although the sudden disappearance of combined arms cooperation in Egypt's offensive on 14 October and Iraq's defense of Kuwait during the Gulf War are the best examples of this problem, there have been numerous other instances, albeit less dramatic. On many other occasions, Arab combined arms operations were poor from start to finish because the senior leadership was not competent enough to extract even the limited degrees of cooperation that better Arab commanders were able to. Thus the Egyptians in Sinai in 1956 and 1967 and against Iraq in 1991; the Syrians on the Golan in 1967, in northern Jordan in 1970, and in Lebanon in 1976; the Saudis in 1991 at Khafji and Kuwait; and the Iraqis in Kurdistan in the 1960s and 1970s, in southern Syria in 1973, and in Iran prior to about 1986, showed little or no capacity for combined arms cooperation whatsoever. The Jordanians were a partial exception to this rule as they showed a somewhat better grasp of combined arms in northern Samaria in 1967 and at al-Karamah in 1968. Nevertheless, Jordanian forces on the Golan in 1973 did not integrate their various forces even this well, leaving their record somewhat mixed.

This historical pattern strongly conforms to the predictions of the Arab-culture and underdevelopment theories. However, these findings appear to somewhat better support the Arab-culture theory over the underdevelopment theory because this record of poor combined arms performance remained essentially constant throughout the postwar period, rather than showing the gradual increase predicted by the underdevelopment theory. It generally does not support any of the variants of the politicization theory, or the Soviet system theory. Commissarism predicts not only that problems with combined arms should be manifest more at senior command levels than at junior command levels, but also that Arab armies that make a determined effort to train for combined arms operations should not necessarily have any problems at all. By contrast, Arab junior officers demonstrated a thorough inability to grasp combined arms operations while no

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<sup>8</sup> The scripting of operations appears to be one of the few aspects of Soviet-style operations the Egyptians appear to have retained after 1978. Indeed, as noted above, the Egyptians scripted their operations more extensively than the Soviets ever imagined doing so. This almost certainly indicates that the Egyptians found the idea of scripting military operations entirely consistent with their "natural style" of warfare. That is, while it may have been the Soviets who first suggested this approach, the speed and fervor to which the Egyptians (and then the Iraqis) took to this approach, plus their retention of this method even after they had scrapped the Soviet model, indicates that the scripting of operations fit well into the Egyptian military model and was not an artificial and alien notion forced upon them by their Soviet mentors.

clear pattern emerged for the senior echelons. Moreover, even those militaries that went all out to try to train their forces to conduct combined arms operations--the Egyptians and Syrians in 1973 and the Iraqi Republican Guard after 1986--simply could not get their tactical forces to internalize the concept. Although both praetorianism and palace-guardism both correctly predict the general problems with combined arms, the evidence ultimately fails to support either theory because the trends persisted across the region and over time, regardless of the influence of either palace guardism or praetorianism. In addition, praetorianism predicts that Arab combined arms operations should suffer because their officers will be too preoccupied to properly train their forces, but that whenever they did make a determined effort to prepare for combined arms operations they would do fine. However, the evidence shows that no matter how hard Arab armies trained for combined arms operations they could not make it work. Finally, the Soviet-system theory fails in this category because it predicts that Arab armies would pay the same close attention to proper combined arms as the Soviets. However, even when Arab armies that were heavily reliant on Soviet practices--such as the Egyptians and Syrians during the October War--tried to instill combined arms operations into their troops they were not able to do so. In short, the problem was not the lack of attention to training and preparation for combined arms, but the inability of junior officers to grasp the concept that created the persistent problems.

### Unit Cohesion

The cohesion of Arab units has varied widely, not only from war to war and army to army, but even within armies during the same war. Nevertheless, Arab unit cohesion has been good more often than it has been bad, and on a number of occasions it has been outstanding. The dominant pattern has been for Arab tactical formations to remain cohesive and combat effective even when placed in dire situations in which it would have been reasonable to expect the forces of any army to dissolve. The stand of the Iraqi Republican Guard (especially the Tawakalnah 'alla Allah Mechanized Division) against the US VII Corps during the Gulf War, the repeated attacks by the Iraqi 6th Armored Brigade in 1973, the Egyptian defense of Abu Ageilah in 1956 and again in 1967, the Jordanian defenders of Ammunition Hill and many other sites around Jerusalem in 1967, and the tenacious Syrian defense of any number of positions during the 1967, 1973 and 1982 conflicts all attest to the superb cohesion of Arab units in extremely adverse situations.

For the most part, Arab forces tended to fall apart only when they were ordered to conduct a general retreat *and* were faced with aggressive pursuit by their attackers. Thus Egyptian forces in Sinai in 1956 and 1967, Jordanian forces in 1967, Syrian forces in 1967, and Iraqi forces in 1981-1982, only began to collapse after their army had begun to retreat and their escape routes were unexpectedly threatened or cut. Moreover, it was difficult to establish any clear correlation between Arab unit collapses and the flight of their officers. It is certainly true that Arab officers have deserted their troops in many conflicts, sometimes in droves. Likewise, it is also true that in many of these same conflicts Arab unit cohesion fell apart. However, there are plentiful accounts of Arab units whose leaders deserted them but which nonetheless hung together and kept on fighting. What's more, there is no way to determine whether the number of instances that officer desertions caused a unit to collapse exceeded the number of times it had little or no effect on unit cohesion, although the figures seem to be roughly equal, or at least comparable.

It is worth noting that these results clearly disconfirm the argument of Yehoshofat Harkabi in his 1967 *Orbis* article.<sup>9</sup> In this piece, Harkabi claims that one of the principal reasons for Arab defeats in the 1956 and 1967 Arab-Israeli Wars was interpersonal

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<sup>9</sup> Yehoshofat Harkabi, "Basic Factors in the Arab Collapse During the Six-Day War," *Orbis*, Fall 1967.

hostility prompting Arab unit cohesion to disintegrate under the slightest strain. In my reading of Arab military history, I found that no such pattern of poor unit cohesion exists--even in the two wars on which Harkabi focuses--and that, if anything, Arab unit cohesion has generally been quite good. In particular, I find it extremely difficult to square Harkabi's claims with the stand of Arab units at Abu Ageilah, Rafah, the Giradi Pass, Jebel Libni, Ammunition Hill, Abu Tor, and elsewhere in those two wars. Also, note that in Chapter 2 of this study I indicated that I had found very little in the sociological literature on the Arab world that would suggest that a pervasive "anomie," as argued by Harkabi, was an accepted element of Arab culture.<sup>10</sup> Consequently, I find little reason to accept Harkabi's claim that poor unit cohesion was the fatal flaw of the Arab armies.

The general patterns of strong Arab unit cohesion support the Arab-culture theory fairly well. Indeed, if anything, they suggest that the elements of group loyalty identified by the theory are actually stronger than originally assumed. Moreover the pattern of units disintegrating only after a general retreat had been unhinged implies that it was the inability of Arab forces to improvise a response once their escape route had been blocked, combined with the demoralization of defeat and retreat, that caused unit cohesion to finally fail. Thus it was another aspect of Arab military effectiveness correctly predicted by the Arab-culture theory--difficulties conducting ad hoc operations--that seems to have led to the general collapse of unit cohesion in several Arab armies. Consequently, the Arab experience conforms closely to the pattern predicted by the Arab-culture theory, those instances in which the evidence diverges from this prediction are well explained by other predictions of the same theory, and overall the pattern was constant across the Arab world and over time, also as predicted by the Arab-culture theory.

On the other hand, these conclusions clearly contradict the predictions of the commissariat and praetorian variants of politicization of the military. To some extent, both of these theories correctly predict that Arab officers would desert their men if things got rough, but even on this score they overpredicted such behavior. With the exception of Egyptian officers in 1967, Arab officers stuck with their troops more than they fled, and when they did desert, it was usually only when the situation was clearly lost. Of greatest importance, however, both of these explanations predicted that Arab units would collapse more frequently than they did and would certainly collapse when their officers deserted. For the most part, Arab units not only remained cohesive under difficult conditions, but many stuck together even after their officers deserted, suggesting powerful forces were holding them together. Thus it may have been the case that politicization did cause officer-enlisted problems that damaged unit cohesion, but Arab cultural patterns worked in the opposite direction, creating strong unit cohesion. This would seem to explain the uneven pattern of Arab unit cohesion during the postwar period, and the fact that unit cohesion was exceptionally good more often than it was exceptionally poor would suggest that the Arab cultural forces promoting unit cohesion were a stronger influence than the effects of politicization promoting unit disintegration.

### **Personal Bravery**

Bravery was rarely a problem for Arab armies and usually a decided strength. Problems with officers deserting their units in combat were mostly among more senior officers, while junior officers and enlisted personnel often fought hard. There are countless anecdotal accounts of Arab soldiers and officers sacrificing their own safety for their mission, and the opponents of the Arabs invariably credited them with staunch (although not necessarily skillful) resistance. This is not to say that there were not a number of instances of Arab units fleeing *en masse* after only a minor setback, only that there were far more numerous cases of Arab soldiers and units tenaciously carrying out

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<sup>10</sup> See Chapter 2, footnote 28.

their missions long after their actions had been rendered futile.

On the offensive, Arab forces repeatedly charged into murderous fire and kept up their attacks even when repeatedly mauled by their adversaries. This pattern was evinced by the Iraqis against the IDF in southern Syria in 1973, by the Syrians at Red Ridge in 1973, by the Syrian Air Force over Lebanon in 1982, and even by the Saudis at R'as al-Khafji in 1991. On the defensive, Arab units often fought ferociously from their positions, even long after they had been outflanked, bypassed or otherwise neutralized. While they rarely fought well, they usually fought hard and frequently continued to fight from their fortifications long after the battle had been decided. Jordanian defenders on the West Bank in 1967 and at al-Karamah in 1968; Egyptian forces in the Fallujah pocket in 1948, in the Sinai in 1956 and 1967, and at the Chinese Farm in 1973; Iraqi forces at al-Basrah in 1982 and again in 1987, and their Republican Guard divisions against the US VII Corps in 1991; as well as Syrian forces on the Golan in 1967, and in Lebanon in 1982, all demonstrated tremendous courage in standing their ground and fighting hard in extremely difficult situations. Indeed, what is truly noteworthy about Iraqi performance during the Gulf War is not that 200-400,000 Iraqi soldiers deserted or surrendered immediately to Coalition ground forces, but that after 39 days of constant air attack, the destruction of their logistical supply network, and their blatant inferiority to Coalition forces, another 100-200,000 Iraqi troops actually stood their ground and fought.

In this case as well, the evidence supports the Arab-culture theory but fails to support the commissarist theory. While the Arab-culture theory correctly predicted that Arab soldiers would remain steadfast, would willingly sacrifice to achieve their missions, and would fight tenaciously, the commissarist variant of politicization predicted that Arab soldiers would have little commitment to any of their causes, would have little love for their officers, and would bolt whenever things began to look bad. In many cases it was true that Arab soldiers had little commitment to the goals of a war--Iraq's invasion of Kuwait being the most obvious example--and there were also considerable officer-enlisted frictions, as predicted by commissarism. Moreover, in many cases, these problems did prompt Arab personnel to flee rather than fight, also as predicted by commissarism. However, it was more often the case that Arab units did not run, but stood their ground and fought tenaciously. Although the Syrian armed forces may have suffered most from commissarist controls beginning in the early 1960s, in every war, Syrian units fought tenaciously: attacking without let up and defending until their positions were physically overrun. Thus it is clear that a much stronger force was at work promoting Arab personnel to fight courageously than the forces of commissarism working to promote cowardice.

In addition, the patterns of Arab bravery remained constant, as predicted by the Arab-culture theory, while Arab cowardice--to the extent it existed--did not necessarily vary with fluctuations in commissarism. For example, in 1973, after the Egyptian armed forces had been thoroughly depoliticized, some Egyptian units and commanders still broke and ran after the Israelis had crossed to the West Bank of the Suez and were driving south to cut off the Egyptian Third Army. Therefore, while the bravery predicted by the Arab-culture theory was a more common pattern than was the cowardice predicted by commissarism, Arab bravery held constant just as the influence of Arab culture did, while Arab cowardice did not necessarily fluctuate with the variations in commissarist politicization.

It is also worth pointing out that at no time did commissarism seem to cause Arab personnel to fight hard in the belief that they would be executed if they didn't. The best example of this was the Iraqi army in the Kuwaiti Theater of Operations in 1991. Few Iraqi soldiers had any desire to fight the US and its allies for Kuwait, but they had no choice in the matter. What's more the Iraqis were executing deserters left and right, and

the regime had a long history of shooting those who had not performed well in combat.<sup>11</sup> Clearly then, there was a huge incentive for Iraqis soldiers to fight hard to avoid execution. However, over 100,000 Iraqis soldiers did desert--and a number of them were shot--while another 80,000 surrendered almost immediately to Coalition forces when the ground war began. Indeed, those units that stood and fought were not those most fearful of being executed, but those most committed to the regime and its goal, the Republican Guards and the regular Army heavy divisions. Thus the Iraqi example clearly demonstrates that the fear inspired by commissariat methods promotes desertions, surrenders and half-hearted efforts rather than bravery and determination.

### **Maintenance and Repair**

Arab armed forces had a very poor track-record of keeping their weapons up and running. Combat units had few organic personnel capable of repair work, requiring them to perform even the most minor repairs at large, central depots. In addition, the personnel manning these repair depots were often foreigners; Cubans, Russians, East Germans, Americans, Pakistanis, and Indians dominated most of the major maintenance and repair facilities of the Arab armies and air forces. Most Arab soldiers and officers showed little appreciation for the dangers of not attending to their equipment, with the result that combat units performed poor and infrequent maintenance on their weapons. Arab combat units generally had operational readiness (O/R) rates of between 67 and 50 percent. Operational readiness rates greater than 70 or 80 percent were rare, while O/R rates as low as 25 or 30 percent were not.

One of the significant advantages Israel had over its Arab adversaries was that Israeli tank crews had high levels of technical skills and were able to quickly repair most minor problems themselves. In addition, Israel had a large armored vehicle recovery and repair capability which allowed it to quickly repair even the most seriously damaged tanks and return them to combat. Arab armies displayed exactly the opposite tendency. Vehicles were left on the field of battle because of relatively minor problems, few were recovered, and those that were sent to a maintenance base for repair rarely returned to the battle in a timely manner.<sup>12</sup>

These findings generally fulfill the predictions of both the Arab-culture and underdevelopment theories. Both theories predicted that Arab armies should have had great difficulty maintaining and repairing their weapons and vehicles. However, once again, the evidence appears to conform somewhat better to the Arab-culture theory because maintenance and repair appears to have improved little if at all between 1945 and 1991. Nevertheless, the evidence is ambiguous and it may be that Arab units were more diligent and more proficient in these areas by 1991 than they were in 1945, which would conform more to the slow, modest improvement predicted by the underdevelopment theory.

Arab armies mostly did not conform to the various patterns of repair and maintenance predicted by the Soviet-system theory. Arab armies and air forces did not use their combat formations like interchangeable drill bits, allowing them to be worn down in combat and then replaced by a fresh, identical unit. Nor did Arab units generally refrain from training with their equipment to ensure that the latest weapons were fully ready when they had to go to war. While Arab units showed little attention to repair and maintenance practices, they tried to sustain their units in combat rather than replacing them, and Arab units trained on the weapons with which they went to war. In short, the

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<sup>11</sup> Michael Eisenstadt, "The Iraqi Armed Forces: Two Years On," *Jane's Intelligence Review*, March 1993, p. 125; *The Gulf War Air Power Survey, Volume II, Part II: Effects and Effectiveness*, (Washington, DC: GPO, 1993), pp. 165-169, 220; US Department of Defense, *Conduct of the Persian Gulf War*, (Washington, DC: GPO, 1992), p. 159; and US News and World Report, *Triumph Without Victory*, (NY: Times Books, 1992), pp. 404-405.

<sup>12</sup> Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, p. 142.

Arabs did not employ any of the Soviet methods to skirt problems arising from poor maintenance and repair practices.

The one exception to this rule is that Arab armies did, like the Soviets, rely on central repair depots for most maintenance and repair needs. Nevertheless, this similarity seems best explained by reference to underdevelopment and perhaps Arab-culture rather than reliance on the Soviet system *per se*. Neither Russian peasants nor Arab *fellahin* were capable of adequately maintaining their vehicles because of their unfamiliarity with sophisticated machinery. The Russian peasantry enjoyed a somewhat better level of socio-economic status than the Arabs, thus partially explaining why Soviet units were not quite so dependent on their repair depots as the Arabs. However, even in this category, the differences in socio-economic level do not seem to entirely explain the greater dependence of the Arabs, suggesting cultural differences may also have played a role.

### **Assimilation and Employment of Military Equipment**

Arab armed forces invariably required long periods of time to learn to properly operate and maintain new weapons. In many cases they required longer to absorb new technology than other Third World militaries. Moreover, even long after Arab armed forces had acquired a new weapons system they were unable to take full advantage of its capabilities. In most cases, Arab personnel were never able to employ advanced, complex weapons to the full extent of their capabilities. Arab forces with state-of-the-art equipment often were defeated by adversaries possessing far less advanced, even primitive, weapons because the Arab forces got so little value out of the capabilities of their equipment. Along similar lines, the general dearth of technical skills among Arab military personnel limited the number of sophisticated weapons systems that Arab armed forces could effectively field. For example, a poor pilot-to-aircraft ratio was the rule in many of the other Arab countries thereby limiting the number of aircraft that could be mustered at any given time.

While this problem was so widespread and so pernicious that it can only be summarized with blanket statements, a few examples do stand out. First there was Saudi Arabia taking the longest amount of time to learn how to operate US Cadillac-Gage armored cars of thirty different militaries to which these vehicles were sold. In addition, US military personnel suggest that this ranking was far from anomalous. Second, there was the example of the Israeli brigades armed with Soviet equipment captured from the Egyptians and Syrians in 1967 which then defeated much larger Egyptian and Syrian units employing more advanced Soviet equipment in 1973. Finally, there was the example of Jordanian units in 1967 equipped with M-47 and M-48 Pattons which were rather easily outfought by Israeli units armed with obsolete M-51 Shermans with 75 mm guns that could not penetrate the frontal armor of the Jordanian Pattons.

In this case, the historical experience of Arab militaries conforms broadly to the predictions of both the Arab-culture and underdevelopment theories. In this case, however, the evidence appears to fulfill the predictions of the underdevelopment theory better than that of the Arab-culture theory. Specifically, it is almost certainly the case that Arab armies in 1991 were at least marginally better able to absorb and employ new weaponry than they had been in 1945. The Arab armies in 1945 were comprised of men who frequently had never seen an automobile, let alone a tank. By 1991, all Arab personnel had some (limited) exposure to machinery and so were slightly better equipped to acclimate to new technology. This modest improvement conforms better to the predictions of the underdevelopment theory than to those of the Arab-culture theory, which predicted a virtually changeless constant across the region and over time.

### **Logistics**

Logistics appears to be a strength of at least some Arab armies, although it is difficult to discern a consistent pattern across the region. For the most part, Arab armies and air forces did not suffer in combat because they lacked ammunition, spare parts or

other combat consumables. Arab quartermasters generally did at least an adequate job of ensuring that their combat formations got the provisions they needed to do the job. Even when Arab logistical services performed poorly they never crippled the ability of their forces to fight.

Still, there was considerable variance from country to country. Historically, the only Arab military that suffered recurrent logistical problems was the Syrian Army and most of these problems were probably tied to the failure of Syrian quartermasters to understand the Soviet "push" logistics system. On the other hand, Iraqi logisticians performed exceptionally well, especially during the October War and the Iran-Iraq War. Despite the stultifying rigidity of most aspects of the Iraqi military, Iraqi logisticians demonstrated remarkable flexibility manipulating and adapting the hybrid Iraqi logistics system to accommodate the needs of their combat forces throughout the war with Iran. Neither Jordanian nor Egyptian forces suffered from supply problems in their military operations over the years, and although they did not perform as well as the Iraqis, on occasion they did pull off impressive logistical feats. The most impressive of these operations was the logistical effort that supported the Egyptian assault across the Suez Canal in 1973. Although the Saudis have shown no particular indication that they would be capable of taking over and efficiently running their logistics system they have never tried, and so it is impossible to conclude for certain the extent of Saudi logistics capabilities.

Arab logistical capabilities fail to conform to the predictions of the Arab-culture, underdevelopment, and Soviet-system theories. The lack of a clear pattern of poor behavior contradicts the predictions of both the Arab-culture and underdevelopment theories that all Arab militaries should do badly in the area of logistics. The historical evidence also does not support the Soviet-system theory. Arab militaries have not necessarily performed better when relying on Soviet logistics practices and done worse when relying on a different system. The Syrians specifically could not figure out the Soviet system, while the Iraqis--who did best of all--employed a weird hybrid with British, Soviet, and indigenous elements.

One possible explanation for these findings supports the Arab-culture theory as it focuses on patterns of behavior derived from peculiar national cultures (sub-cultures). Iraq and Egypt have shown very impressive capabilities in logistics; Syria has performed poorly; Jordan has not necessarily suffered any great problems, but neither have its forces been truly tested in these areas; and there is inadequate information available on Saudi logistics. This pattern suggests that another influence may be at work, perhaps a similarity in the sub-cultures of Egypt and Iraq that has produced unexpectedly good performance from them. Along these lines, it is possible that the better performance of Iraqi and Egyptian quartermasters may derive from the fact that these two nations have their roots in the Nile and Mesopotamian river cultures.<sup>13</sup> Control of the rivers, particularly for irrigation, traditionally demanded prodigious logistical (and engineering) feats, and this historical necessity may well have seeped into the Iraqi and Egyptian sub-cultures, resulting in uncharacteristically good logistical capabilities.

### **Combat Engineers**

On average, Arab armies demonstrated fairly good engineering capabilities. Arab armies had little difficulty crossing water barriers and other terrain obstacles. They did a reasonably good job breaching enemy defensive lines while their own fortifications were often quite impressive. Arab engineers generally displayed a high level of proficiency in building defensive positions quickly and effectively, although they did not always maintain those defenses properly. It was rarely the case that failings of Arab combat engineers hindered an operation. Even on those occasions when Arab engineers

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<sup>13</sup> For example, see John Waterbury, *Hydropolitics of the Nile Valley*, (Syracuse, NY: Syracuse University Press, 1979). Barry Posen has also suggested this as a possible explanation.



performed poorly, they usually were only one small element in a larger catastrophe.

As in the case of logistics, Iraqi engineering efforts were consistently good and during the Iran-Iraq and Gulf Wars were extremely impressive. Both on the attack and in defense, Iraqi engineers consistently turned in outstanding performances. Egyptian performance has also been mostly positive. Egyptian defenses in Palestine in 1948 and in Sinai in 1956 and 1967 were quite good, while the engineering effort that made possible the assault across Suez was superb. However, Egyptian breaching operations during the Gulf War showed little of the skill displayed at Suez. The Syrian army also has had some difficulties with engineering operations, but overall their performance has been creditable. Syrian defenses on the Golan in 1967 and in southern Syria in 1973 were very formidable, although the breaching operations of Syrian forces during the October War left much to be desired. Jordanian fortifications have also been quite good, with the defenses around Jerusalem in 1967 and al-Karamah in 1968 standing out in particular. Beyond this, there is little information regarding Jordanian engineering capabilities on the offensive, while the Saudis rely on foreign contractors--or foreign armies--for most of their engineering needs.

As with logistics, the historical experience of Arab combat engineers fails to conform to the predictions of any of the potential explanations. The underdevelopment and Arab culture theories both predict poor engineering capabilities. Although the Soviet-system theory predicts good performance, the actual pattern did not correlate with which Arab armies employed Soviet methods. The Iraqis, the Jordanians, and the Egyptians before they began to rely on Soviet practices, all did well, while the Syrians at the peak of their mimicry of the Soviets did very poorly breaching Israel's undermanned Golan defenses. In this case as well, a partial explanation for the strong performance of Arab combat engineers may come from the same sub-cultural traits of the Iraqi and Egyptian "river-valley" cultures. Nevertheless, the evidence here does not conform as well to the expected pattern of this theory: neither Jordan nor Syria can be said to qualify as a river-valley culture, yet at the very least, they built first-class defensive positions. In addition, Egypt's relatively poor showing during the Gulf War does not fall neatly in line with the predictions of this theory.

### **Technical Support**

The scientific and technical communities of the Arab states, such as they were, contributed little to Arab military efforts. Arab defense industries were woeful and more of a drain on scarce resources than a boon to the armed forces. Arab armaments factories were able to produce little beyond the most basic ammunition and small arms for their militaries. Similarly, Arab militaries made little use of technical assets or technological solutions to military problems. On those occasions that Arab armies did turn to technology to solve a problem it normally was a simple technical solution, often relying on equipment manufactured elsewhere. For example, to overcome the Israeli sand barriers on the east bank of the Suez, the Egyptians employed West German water pumps. For the most part, Arab militaries took a non-systematic approach to analyzing their capabilities and needs, and rarely (if ever) employed techniques such as systems analysis, or calculations such as the Soviets employed to plan their operations. Operational research in Arab militaries was almost unheard of and research and development generally was poorly funded and produced few useful results.

The only real exception to this rule was unconventional weapons development. Iraq (and to a lesser extent Syria and Egypt) made a determined effort to acquire an array of unconventional weapons: chemical warfare (CW), ballistic missiles, biological warfare (BW), and nuclear weapons. Iraq obtained CW during the 1980s, BW around the same time, and enhanced the range of its Soviet-made Scud ballistic missiles by 1988. In addition, the findings of the UN Special Commission after the Gulf War indicated that Iraq was very close to producing a simple nuclear weapon. Iraq was able to achieve these exceptional results by concentrating virtually all of its best scientific minds on these

projects and providing them with lavish resources for their efforts. Consequently, this exception does not disprove the rule. The Iraqis made exceptional progress in a few high-priority programs by focusing much of their meager technical resources on them. However, beyond these narrow successes Iraq's defense industries and scientific community offered little of value to the Iraqi military.

This evidence supports the Arab-culture and underdevelopment theories, both of which predicted that Arab militaries would have problems in this area. Yet once again, these findings tend to fulfill the predictions of the underdevelopment theory somewhat better than those of the Arab-culture theory. As with assimilation of new military equipment, it is clear that Arab armed forces were better disposed and better able to employ technical solutions to military problems in 1991 than they had been in 1945. The idea of modifying a Scud missile to give it greater range to be able to hit Tehran probably would never have occurred to Iraqi officers in 1945, and if it had it clearly would have been beyond their scientific abilities. However, in 1988 the al-Husayn modified-Scud became a key element of Iraq's strategy against Iran. Thus there was a slow, gradual improvement in the willingness of Arab armed forces to rely on technical solutions accompanied by a modest increase in the ability of Arab technical establishments to provide the needed solution. This fulfills the predictions of the underdevelopment theory, and contradicts somewhat the predictions of the Arab-culture theory, which predicted that these problems would remain constant and would show little if any progress. Finally, the evidence generally does not support the Soviet-system theory, which predicts that Arab militaries should have relied heavily on quantitative methods, systems analysis, and technological solutions to military problems as the Soviets did.

### **Intelligence**

Arab intelligence operations, in terms of both collection and analysis, were usually very poor, although at times Arab strategic intelligence performed quite well. For the most part, the Arab militaries paid little attention to reconnaissance, patrolling, espionage and other forms of intelligence gathering. Arab intelligence services frequently made little effort to collect any information at all on their adversaries, even unclassified information that could be gathered from press reports and military literature. Analysis was frequently skewed or superficial and distribution was woefully inadequate. Arab armies often went into battle with little idea as to the order of battle, organization, infrastructure, plans, or tactical doctrine of their enemy.

At tactical levels, Arab armed forces uniformly did a miserable job because junior officers almost never bothered to adequately patrol their defensive sectors or their routes of advance. Indeed, on many occasions Arab commanders even failed to deploy security screens/observation posts/listening posts in front of their forces to provide advance warning of an attack. Arab tactical commanders relied entirely on information passed down from higher levels rather than attempting to find out for themselves what was over the next hill. Beyond this, what little information was collected often was misinterpreted or deliberately misreported.

The dearth of reliable information from tactical forces was only one problem for strategic intelligence. Arab air forces rarely flew reconnaissance missions and Arab intelligence services produced little in terms of human reporting. Indeed, many of the Arab intelligence services paid little or no attention to foreign armies and instead spent all of their effort watching their own armed forces. Numerous Arab generals must also be faulted for failing to appreciate the importance of good intelligence. In most cases, little was collected because little was requested by the senior planners and operators. Finally, intelligence collected by Arab military forces and intelligence services was frequently distorted at the highest levels to conform to the preconceived notions of the regime.

There were several important exceptions to this rule. On several occasions, particularly competent Arab generals or command staffs recognized the importance of having adequate information on their adversaries and directed comprehensive efforts to

gather and analyze intelligence on the enemy that often produced very useful results. The Egyptian intelligence effort before the October War was the best example of this, but Syria's intelligence gathering campaign in 1973 and Iraqi preparations for the 1988 offensives against Iran and the invasion of Kuwait in 1990 also were quite competent. Likewise, Jordanian intelligence correctly predicted the Israeli operation at al-Karamah while Egyptian intelligence in 1956 had a fairly good understanding of what the original British/French invasion plan would look like, although they were crossed up by the sudden Allied decision to change invasion sites.

In each of these cases, the improvement appears to have come entirely at strategic levels. First, the orders and inspiration for the intelligence gathering effort came from the highest echelons and were a dramatic break from past behavior. The General Staff basically had to order its subordinates to conduct these missions and had to order its intelligence services to assess the data being collected. Second, these efforts relied primarily on strategic intelligence assets: spies, aerial reconnaissance, and technical collection methods such as signals intelligence. In other words, the military high command employed the intelligence gathering assets at its disposal to collect the needed information, rather than relying on their tactical forces to gather it. Perhaps the best example of this was the Iraqi General Staff during the latter half of the Iran-Iraq War which became heavily dependent on military intelligence provided by the two superpowers for the planning of their military operations. Overall, tactical commanders do not seem to have internalized the importance of these efforts, and instead those instances in which the high command made a major push for information by employing strategic assets seem to have reinforced the belief among Arab junior officers that all intelligence gathering and analysis must be directed by senior levels and then information would be disseminated from top to bottom.

These findings strongly conform to the predictions of the Arab-culture theory. In particular, the failure of Arab tactical commanders to take the initiative to aggressively patrol, as well as their sense that all information should come from higher echelons, fulfill specific sub-predictions of the theory. Moreover, this pattern represented a constant among all of the Arab armed forces throughout the period 1945-1991, as predicted by the Arab-culture theory. The conclusions also fulfill the predictions of the commissarist theory reasonably well because Arab strategic intelligence was mostly terrible and analysis was frequently distorted to suit the preconceived notions of the regime. Moreover, the three instances of very good performance by Arab strategic intelligence ultimately were the result of conscious efforts by the regime to depoliticize the military (even if depoliticization in Syria was a pale shadow of that experienced by Egypt and Iraq). Thus fluctuations in commissarism appear to have produced corresponding fluctuations in Arab intelligence, at least at strategic levels, as predicted by the commissarist theory. The evidence conforms to the predictions of the underdevelopment theory, but not as well as it conforms to the predictions of the Arab-culture and commissarist theories. The historical record fulfills to the prediction of the underdevelopment theory that Arab tactical intelligence gathering should be inadequate in terms of the quantity and precision of the information it produced. However, this fails to capture some of the more important patterns of behavior displayed by Arab militaries in the realm of tactical intelligence. Specifically, the underdevelopment theory offers no explanation for the dramatic absence of patrolling and other routine intelligence gathering operations at tactical levels and the belief among so many Arab junior officers that they were not responsible for providing their own intelligence but that it would come to them from higher authority. Finally, these findings generally contradict the Soviet-system theory. The Soviet-system theory fails to predict the dismal performance of Arab tactical intelligence but instead predicts good performance, especially at strategic levels. Arab militaries simply did not treat military intelligence as the Soviets did.

## **Operational Security**

Despite the pervasive secretiveness, compartmentalization of knowledge, and manipulation of information endemic to Arab armed forces, operational security has usually been decent, but not great. On a few occasions, Arab militaries did a superb job concealing their plans and even their preparations from the enemy. The brilliant Egyptian and Syrian deception efforts which hid their moves prior to the October War are the best examples of this. Iraq's deception campaign and operational security masking its build-up for the invasion of Kuwait was also very well done, successfully duping most of the world into believing they intended only a show of force. On the other hand, there were also times when Arab militaries were very sloppy regarding the security of their operations and their adversaries had little trouble learning all of their intentions and capabilities. Before the Six-Day War, Egyptian and Syrian security measures were so lax that Israel was able to develop a terrifyingly detailed understanding of their entire military establishments. But for the most part, Arab operational security measures were simply adequate, no more, no less.

These conclusions give only mild support for the Arab-culture theory which predicts that Arab operational security measures would be quite good because the Byzantine treatment of information in Arab militaries should make it exceedingly difficult for an outsider to be able to find out what is going on. Particularly problematic for the Arab-culture theory in this category is the fact that Arab operational security has proven best when the Arabs made a determined effort to keep their moves secret, rather than the constant secrecy of Arab military personnel simply making their intentions impenetrable at all times. The evidence also provides lukewarm support for the Soviet-system theory. The Arabs generally did not show the same attention to *maskirovka* as their Soviet mentors. Fluctuations in Arab operational security generally do not correlate with changing Soviet influence. However, some credit must be given to the Soviet-model theory because Syrian and Egyptian operational security improved dramatically after the two militaries greatly increased their reliance on Soviet advice and doctrine after the Six-Day War, and it is reasonable to believe their Soviet advisers played some role in this.

## **Strategic Leadership**

Arab military history between 1945 and 1991 displayed no consistent pattern of strategic leadership, good or bad. Arab generals have not all been political hacks, and some of the political hacks turned out to be reasonably good generals. Yet neither did the Arabs produce any military geniuses. Overall, Arab generalship fluctuated and their fortunes, to some extent, fluctuated with it.

It is certainly true that in some Middle Eastern wars, Arab militaries have been led by criminally incompetent senior commanders who bear the greatest responsibility for defeat. Iraq's military commanders planned and directed the initial invasion of Iran in 1980 about as poorly as possible. Iraqi strategic leadership against the Kurds during the early 1960s, and to some extent against Israel in 1973, also turned in performances that were mediocre at best. Saudi leadership after Iraq's invasion of Kuwait showed little understanding of how to plan or conduct modern military operations, and Riyadh was fortunate that its generals were not called on to lead a campaign against the Iraqis. Cairo's direction of the Egyptian defense of Sinai during the Six-Day War was abysmal, and Amer's drug and/or alcohol induced pathologies were only part of the problem.

In other wars Arab generals performed reasonably well, not necessarily paving the way to victory, but also not damning the army to defeat. Syria's high command did a decent job in 1982 against Israel. On the one hand, Damascus' handling of its SAM units was fairly poor, but on the other hand, its response to the initial Israeli moves were very commendable. Iraqi and Egyptian strategic leadership in Palestine in 1948 was fine, occasionally performing badly and occasionally well, but generally doing an adequate job. Likewise, by the 1960s, Baghdad had figured out a strategy to beat the Kurds and developed a number of competent operations that probably could have resulted in victory

(over a less-than formidable foe) if its tactical capabilities had not been so abysmal. The Egyptian high command did all that was asked of them in 1956 and most of their moves were eminently sensible. Jordanian scapegoating of General Riyadh aside, Amman's direction of the defense of the West Bank in 1967 was also reasonably good, and even those moves that ultimately proved harmful were based on creditable strategic thinking.

Finally, in some Middle East wars, Arab armies have been led by very competent senior commanders, but these generals were able to achieve only very modest results because they were limited by the poor performance of the armies under their command. Indeed, in these cases it has been the poor tactical abilities of Arab military forces that have hindered the achievements of their generals, and not vice versa. Iraqi generalship against Iran in 1987-1988, and to a lesser extent in 1990-1991, probably deserve the highest praise, while Cairo's planning and direction of the War of Attrition and the October War were very close runners-up. Jordan's strategic leadership did an excellent job organizing the defense of al-Karamah in 1968. Also, their failure to employ proper counter-insurgency operations aside, Egyptian generals displayed considerable ability in the design and preparation of their conventional offensives in Yemen in the early 1960s. The Ramadan and Haradh offensives employed very clever schemes of maneuver, they were well-planned, and might have been very effective against a conventional foe. In addition, US military personnel who have had contact with Jordanian, Egyptian, and Iraqi senior officers uniformly have expressed a high degree of respect for their military skills.

This historical evidence fulfills some of the predictions of the commissarist variant of the politicization theory but not others. According to this theory the greatest source of Arab military ineffectiveness should be incompetent senior commanders appointed more for their loyalty than their military skills. Although the instances of poor Arab generalship are probably the most widely known, the evidence does not indicate that they constitute the majority of Arab military experience. This strongly suggests that the central problem resulting in poor Arab military performance is not poor generalship, as would be predicted by the commissarist theory. Nevertheless, the evidence does fulfill other predictions of the commissarist theory. First, Arab generalship has been very poor at times, as predicted by the theory. Second, when Arab generalship has been poor it was an important contributing factor to their poor military performances overall. Third, it was generally the case that poor Arab generalship was the product of commissarist politicization. That is, the worst Arab generals often reached their positions of command because the regime had promoted loyal incompetence over potentially dangerous competence. Consequently, commissarism seems to be a good explanation for poor Arab generalship, but poor Arab generalship is not a very good explanation for the general pattern of poor Arab military effectiveness since 1945.

The evidence strongly contradicts the predictions of the palace guard variant of politicization. The palace guard theory predicts that Arab generalship would be poor because Arab generals would have no idea how to conduct conventional military operations because they would have been accustomed to mostly focus their attention on internal security matters. First, Arab generalship really wasn't that bad at the height of palace-guardism in the immediate aftermath of decolonization: Arab generals performed adequately, if not well, in the 1948 War of Israeli Independence. The palace-guard theory would predict that it should have been worst at that point, and this evidence directly contradicts it. Second, there is no clear shift in Arab strategic leadership after palace-guardism recedes as a major force guiding Arab militaries. Thus, the evidence fails to conform to the broad predictions of the palace-guard theory, and the variance in the influence of palace-guardism did not correlate with any noticeable variance in Arab military effectiveness.

### **Tactical leadership**

The vast majority of problems experienced by Arab militaries were manifested at tactical levels.<sup>14</sup> Indeed, as noted above, the Arabs produced some very competent senior commanders and in such instances, strategic operations and plans reflected this quality. However, tactical performance remained remarkably constant--and consistently poor--over the entire period 1945-1991. As the sections on various aspects of tactical military effectiveness detail above, Arab tactical commanders consistently failed to demonstrate initiative, flexibility, creativity, independence of thought, an understanding of combined arms integration, or an appreciation for the benefits of maneuver in battle. These failings resulted in a dearth of aggressiveness, responsiveness, speed, movement, intelligence gathering, and adaptability in Arab tactical formations that proved crippling in every war the Arabs fought.

A good example illustrating the dichotomy between Arab tactical and strategic leadership can be found in the Arab experience in combined arms operations. Many Arab senior commanders displayed an excellent grasp of combined arms operations, however, Arab tactical formations could not execute combined arms operations without strict guidance from higher authority. This was most clearly displayed in Egyptian operations in 1973 and Iraqi operations between 1986 and 1991. In both of these cases, the senior leadership was quite competent and developed elaborate campaign plans that essentially forced the armies under their command to conduct combined arms operations. However, in both the Iraqi and Egyptian cases, the moment that the course of battle deviated from expectations to any significant degree--thereby making the detailed campaign plans of the general staff irrelevant and forcing tactical commanders to assume the burden of leadership--combined arms integration immediately came apart.

This pattern of behavior strongly fulfills the predictions of the Arab-culture theory. It clearly demonstrates the dichotomous relationship predicted by the theory for Arab personnel in large hierarchies: senior figures are expected to show initiative, creative, etc., while junior figures are expected to remain passive and responsive and defer decision-making to their superiors. Moreover, this pattern of tactical ineffectiveness remained remarkably constant among all of the Arab armies throughout the postwar period, as predicted by the Arab-culture theory.

On the other hand, the evidence mostly fails to fulfill the predictions of the palace-guard variant of politicization. Although palace-guardism also predicts tactical incompetence, the historical evidence did not demonstrate any increase in tactical leadership in those instances when Arab militaries devoted themselves to conventional military missions as opposed to internal security responsibilities. This pattern directly contradicts the crucial prediction of the palace-guard theory.

The evidence also contradicts the predictions of the Soviet-system theory. First, Arab tactical commanders manifested this behavior to a much greater extent than suggested by the Soviet-model theory. As an example, the Soviet-system theory predicts that Arab brigade commanders would have to tell their battalion commanders to take a hill, but it would then be up to the battalion commander to figure out how to take the hill relying on the limited range of options for such missions the Soviets provide. Instead, the pattern among the Arab armies was that the brigade commander had to order the battalion commander not only to take the hill, but also to decide exactly how the battalion was going to take the hill. Indeed, in many instances, these decisions probably would have been made at division level or even higher in the Arab armies. Second, poor Arab tactical performance proved to be a constant and did not fluctuate in accord with shifts in Soviet influence on Arab militaries.

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<sup>14</sup> For an interesting examination of this problem see Brigadier Syed Ali El-Edroos, *The Hashemite Arab Army, 1908-1979*, (Amman, Jordan: The Publishing Committee, 1980), pp. 519-533. El Edroos also focuses on the consistently poor performance of Arab tacticians/junior officers as the critical problem facing Arab armies.

### **Ability to Plan and Execute Complex Operations**

With some notable exceptions to the contrary, Arab militaries generally did a good job planning and implementing large complex military operations. Arab generals do not seem to have shied away from a military operation because the planning it required would be too complicated or demanding. Indeed, in several cases, Arab operations became more complex in response to lessons learned from previous defeats. Ultimately, whenever competent Arab commanders made a determined effort to properly plan and lead an operation, they did quite well, regardless of its complexity.

Once again, Egypt's highly complex and intricately planned offensive across Suez in 1973 is the best example of this pattern. Iraq's five offensives against Iran in 1988 and its invasion of Kuwait in 1990 were also very competent, complex operations. Cairo also did well with its Ramadan offensive against the Yemeni Royalists as did Amman against the Palestinians after the initial fiascos of "Black" September. There were also a number of large Arab operations that failed not because the Arabs could not deal with the complex interactions of the different military elements, but because of the various failings of Arab tactical commanders detailed above. Thus, the Syrian assault on the Golan in 1973, the various Iraqi offensives in Kurdistan beginning in 1965, Iraq's defense of the Kuwaiti Theater of Operations, Egypt's Haradh offensive, and Jordan's defense of the West Bank were all well-planned operations that fell apart because the tactical formations involved failed to be aggressive and creative, did not employ combined arms operations or maneuver in battle, could not get the full benefit of their weapons, etc.

There were a number of complex Arab operations that turned into disasters either because they were poorly planned, poorly implemented, or both. For example, the first Iraqi offensives into Kurdistan in the early 1960s and their invasion of Iran were haphazardly planned and supported and these problems were compounded by the inability of their tactical forces. Similarly, Egypt did a rotten job thinking through its planned defense of Sinai in 1967. Nevertheless, in both of these cases there is little evidence to suggest that the problem was the complexity of the operation itself. Instead, in these cases it appears that the problem was a combination of incompetence and sloppiness on the part of the planners.

There is one set of important exceptions that does complicate the picture in this category of military performance: air operations. In all of their wars, the Arab states were never able to mount a decent air campaign. The closest they came were the Egyptian air campaign in support of the October War and the Iraqi air campaign against Iranian economic targets during the latter half of the Iran-Iraq War, and these were both very mediocre efforts. Specifically, Arab air staffs had tremendous difficulty picking targets for attacks, determining the aircraft and ordnance to be employed, assigning fighter cover, coordinating the movements of different flight elements from different bases as well as their ingress and egress routes, determining the timing and approach routes of attacks, conducting proper reconnaissance both before and after strike missions, performing bomb damage assessments for each mission, assigning restrike missions, providing for rearming and refueling as well as maintenance and repair, and sustaining a constant level of operations long enough to accomplish the objectives of the campaign. Arab air forces had tremendous difficulty coordinating their operations with ground forces and providing close air support. Arab high commands also could not properly coordinate fighter operations with ground-based air defenses and so had to resort to assigning separate zones of coverage to each.

These various findings conform to a greater or lesser degrees to the commissarist, Soviet-system and underdevelopment theories. Although all three theories predicted generally poor Arab planning and execution of complex operations, and the actual history did not conform to these predictions, a closer look at the evidence reveals greater confirmation of the predictions of all three theories. First, to some extent the fluctuations in Arab planning abilities were tied to the varying skills of Arab generals, which in turn correlated well with rising and falling commissarist politicization. Second, although



there was no real pattern of Arab success or failure in planning and executing complex military operations that would correlate with patterns of Arab reliance on Soviet methods, the Egyptians and Syrians did do better after they began to adhere more closely to the Soviet model, and some Soviet influence may have improved the planning of their operations. Third, although the generally good performance of Arab ground forces in planning and implementing complex operations--and the fact that they often did better in more involved operations than in simpler efforts--directly contradicts the predictions of the underdevelopment theory, the abysmal performance of Arab air forces in these same areas strongly confirms those same predictions.

Several possible explanations for the divergent patterns of Arab ground and air planning come to mind. First, it may be that because paranoid regimes tend to make loyalty a more important criteria for pilot selection (who go on to become the senior officers in air forces) than for junior officer slots in their armies, these trends simply reflect the greater incompetence of more heavily politicized Arab air force personnel (which would further support the commissarist explanation). Alternatively, it may be that Arab military personnel have had far more experience with large land operations than with large air operations. Finally, it may be that air operations are categorically different from ground operations in that they are much more heavily dependent on the capabilities and tolerance of the available technology, they require far greater precision and timing, and they are far more abstract conceptually. Consequently, it may be that air operations are fundamentally more complex than ground operations. This last explanation strikes me as the most plausible and, if so, it conforms most closely to the predictions of the underdevelopment theory since it indicates that ultimately there is a level of complexity in planning beyond which Arab personnel begin to have difficulty.

### **Officer Rotations**

Unfortunately, too little data is available on this subject to be able to accurately judge the historical record of Arab forces. Damascus constantly and unexpectedly rotated its senior command billets beginning at least in the early 1970s. The Syrian regime constantly rotated the command of large combat units--particularly brigades and divisions--to ensure that no commander was able to secure the loyalty of his troops to such an extent that he could use them to overthrow the regime. Likewise, the Iraqi regime did the same at least between 1969 and 1980, but halted this practice with the outbreak of war with Iran and the subsequent depoliticization of the Iraqi army.

Syria after 1964 and Iraq from 1969 until 1982, however, boasted the two most heavily (commissarist) politicized militaries in the Middle East, and there is no information available as to whether any of the other Arab militaries suffered from this practice. Given the far greater access of Western military personnel to Egyptian, Jordanian, and Saudi forces, the fact that none have mentioned this as one of the many problems facing these militaries suggests that too frequent command rotations were not a problem for them. Because the Syrian and Iraqi militaries were so thoroughly politicized, this says little about whether too frequent rotations were responsible for general patterns of poor military effectiveness throughout the Middle East.

If, as the available information seems to suggest, excessive officer rotations were not necessarily a major problem for Arab militaries this would contradict the claims of the commissarist variant of politicization of the military. Neither Iraqi nor Syrian general officers were consistently bad during the periods when their regimes inflicted this practice on their armed forces. For example, Baghdad's senior leadership was abysmal at the start of the Iran-Iraq War but had done adequately well during the second Kurdish War of 1974-1975. Likewise, the quality of Syrian commanders has varied considerably since the early 1960s. Of greatest importance, Asad's rotational policy does not seem to have prevented Damascus from putting together a team of first-rate division commanders for the October War. Thus the practice of sudden, frequent rotations does not necessarily correlate with lousy Arab generalship as the commissarist theory predicts.



## **Morale**

Morale has rarely been a significant problem for Arab militaries at the beginning of any war. While morale has varied from army to army and war to war--and information is unavailable regarding morale for Arab armed forces in several campaigns--it is difficult to find instances in which Arab morale was poor at the beginning of a conflict. There were numerous occasions when Arab morale declined precipitously during the course of a war, but this usually was a response to the course of the fighting. Even on those occasions when Arab militaries were unenthusiastic at the start of a conflict, such as Iraq's military before the Gulf War, the Egyptian military at the start of the War of Attrition, and to a lesser extent before the Six-Day War, it had little to do with general problems in the military and everything to do with the specific situation. In 1991, many Iraqi troops were unhappy because they did not want to fight the United States and its allies over something so inconsequential as Kuwait. In 1968, the Egyptians were disconsolate after their drubbing the year before, while in 1967 some Egyptian troops had been dispirited because they had spent the last few weeks before the Six-Day War shuffling around the desert while Cairo tried to figure out exactly what it was trying to do. By contrast, in many Middle East wars, Arab armed forces began with very high morale. All of the Arab armies in 1948 and again in 1973 were very enthusiastic because they were convinced they were going to beat the Israelis, just as the Saudis and Egyptians had high morale in 1991 because they were convinced they were going to beat the Iraqis.

Consequently, there is no clear pattern of poor Arab morale, and for the most part, Arab morale seems to be heavily dependent on the immediate circumstances surrounding the war, rather than broader conditions within the military itself. These findings contradict the predictions of all three variants of the politicization theory. Commissarism, praetorianism, and palace guardism all predict that Arab armies would experience poor morale even before battle was joined because of the factionalism and lack of attention to military training these various phenomena entail. Moreover, with regard to praetorianism and palace guardism, Arab armies did not demonstrate worse morale when these factors were dominant in the 1950s and 1960s and then improve when they receded in the 1970s and 1980s.

## **Training**

Between 1945 and 1991, Arab training practices varied widely. At some points in some armies, training was lackadaisical and neglected. For instance, until the Gulf War, the Royal Saudi Land Forces (RSLF) never made training a major consideration and what training they did was infrequent and perfunctory. In some cases, Arab militaries trained little because their officers were more interested in maneuvering for political position and were not rewarded for preparing their troops for battle. The Syrian army suffered from these sorts of distractions throughout the 1950s and 1960s. However, other Arab militaries were extremely diligent about training and exercises. While their training may not have been effective, it was rigorous and constant. After 1986, Iraq's Republican Guards seemed to never stop training. Likewise the incredible rigor of Egyptian training between 1967 and 1973 is attested to by the fact that the Egyptian armed forces practiced the entire crossing operation 35 times while individual units practiced their specific roles *hundreds* of times. Even the Syrian military made a conscious effort to be diligent about training for war after Asad took power and began to prepare his forces for an offensive against Israel.

For the most part, Arab militaries tended to focus their training methods on conventional military operations against foreign armies. There were some exceptions. In the 1940s, Arab training did concentrate somewhat more on internal security missions, however, this was not their biggest problem. More harmful was the fact that their training was simple and mostly outdated, and most harmful of all was the fact that it was infrequent, unrealistic, and undemanding. Consequently, the minor distraction of training for internal security missions was swamped by the sheer neglect of proper training at that

time. Likewise, different elements of the Saudi military tended to emphasize different missions, and while the RSLF suffered because its training was poor and inadequate, the Saudi Arabian National Guard (SANG) suffered to some extent because it was focused mostly on internal security roles. There were two mitigating factors in the Saudi case: one of the main SANG missions was to be able to defeat a coup by the RSLF, and in the 1980s Riyadh decided to bring in a huge American advisory effort to support the SANG. As a result of these two influences, SANG training improved considerably in quality and also focused on operations to defeat conventional military forces.

One clear pattern did emerge from Arab military history regarding the training of Arab armed forces. Most of the Arab armed forces--the Egyptians, Syrians, Iraqis, and to some extent the Saudis--neglected proper training at first, and what little training they did often was directed at internal security duties. However, as time wore on, all of them became increasingly diligent and serious about preparations for war with foreign foes. For most of the Arab armies, defeat in the Israeli War of Independence was a very rude surprise, resulting in the overthrow of governments and a determination to rebuild Arab military power to be able to defeat Israel. Although the process took a decade or more in most of the Arab states, by the 1970s all of the Arab militaries were very professional in their devotion to rigorous and frequent training for conventional military operations against foreign armies. This shift in the emphasis and focus of Arab training produced only a very modest improvement in Arab military performance, however. The same problems continued to haunt Arab militaries regardless of the extent to which they concentrated on external vice internal security operations. In some cases, military effectiveness even appears to have declined after the 1948 war. This strongly indicates that proper attention to preparations for war was not one of the more important problems hindering Arab armies in combat.

This evidence contradicts both the praetorian and palace guard variants of the politicization theory. The evidence does demonstrate the expected correlation between praetorianism and palace-guardism and neglect of training; Arab militaries did become increasingly attentive to proper training as both palace-guardism and praetorianism declined in the 1950s and 1960s. However, the fact that Arab military effectiveness did not improve as a result of this increased diligence in practicing for war indicates that the neglect of training was not a major problem for the Arab militaries. It did make some difference, but the most significant Arab problems lay in other areas, and were caused by other phenomena.

These results are very damaging to the palace-guard theory. The central argument of the palace guard theory is that Arab militaries have done poorly in combat since World War II because they never bothered to make a determined effort to prepare themselves properly for war with another organized military. The evidence from Egyptian, Iraqi, Jordanian, Syrian, and Saudi military history indicates that this supposition is not correct. First, beginning in the 1950s and 1960s, Arab armies became increasingly more diligent about properly training and preparing for conventional warfare. By the 1970s, most of the Arab armies, and particularly the Syrians and Egyptians, were almost fanatical in their determination to defeat Israel and this was reflected in their devotion to training for war with the Jewish state. Despite these efforts, Arab military effectiveness at tactical levels--where the training was intended to have the greatest effect--improved little. In 1973, all of the Arab militaries performed almost exactly as they had in their past conflicts, at least at tactical levels. While Arab generalship did improve during this period, there is no reason to believe that this was a result of the new emphasis on rigorous training for external security operations. Consequently, even when Arab militaries threw themselves into their training for war they were unable to realize much gain. This suggests that the problem was not so much the rigor and focus of the training (as the palace-guard theory claims) but the method of the training (as the Arab-culture theory argues).

### **Ability of Soldiers to Benefit from Military Training**

Unfortunately, evidence in this area is too thin to make a definitive judgment, however, very weak anecdotal information suggests that most Arab personnel did have difficulty learning military skills. In particular, the various accounts of US and other Western military personnel of the great lengths of time it required to train Arab personnel in rather simple military tasks supports the general supposition that Arab personnel did not take quickly to modern weapons and military practices. For the most part, these reports fall under the rubric of unfamiliarity with machinery, and so it is only by extrapolation that we can assume that Arab armies also had difficulty with non-technical military training--such as hand-to-hand combat and small unit tactics, for example. This assumption may be totally unwarranted and it may well have been the case that while Arab personnel had difficulty learning to handle complex electronic warfare, they did fine when learning non-technical military skills.

To the extent this sketchy information accurately reflects the broader reality, it would fulfill the predictions of the underdevelopment theory. However, even in this case, it is not the whole story. The same reports of Arab difficulties in learning technical skills also claim that Arab military personnel were even slower to pick up military skills than men from other Third World countries. This indicates that there is something else about the Arabs other than simply their low levels of socio-economic development that has hindered them from benefiting from military training. Indeed, such claims support the predictions of the Arab culture theory that it is not merely underdevelopment that hinders Arab personnel from developing a technical proficiency earlier in life.

### **Preferred Operational Tempo**

Throughout the postwar era, Arab militaries generally preferred a slow pace of operations and their campaigns rapidly unraveled when they were forced to fight at even a moderate operational tempo (OPTEMPO). At best, some Arab armies (the Iraqis after 1987 and the Syrians in 1973) were able to maintain a rapid pace of operations for a very brief period of time, after which they required long periods of time to regroup, thus returning to the same slow pace overall. Neither were the most successful Arab military operations necessarily correlated with a high OPTEMPO. The Egyptians "crawled" forward for three or four days in October 1973, and their operations in Yemen were not exactly blitzkriegs. On the other hand, Arab armies collapsed when their adversaries were able to operate at a faster pace. The ability of Israeli and Western forces to maintain a very high OPTEMPO was a major factor in the Egyptian defeats in Sinai in 1956, 1967, and 1973, the Jordanian defeat in 1967, and the Iraqi collapse in 1991.

These results fulfill the predictions of the Arab-culture and underdevelopment theories, both of which predict that Arab armies would prefer a slower pace of operations. Moreover, I find it very difficult to judge whether the ability of Arab armies to handle a higher OPTEMPO improved over time. Of course, the Arab culture theory predicts that it should remain constant, while the underdevelopment theory predicts that it should have improved modestly over time--to reflect the growth in Arab socio-economic levels. However, the evidence is not precise enough, and the levels of distinction too broad to really reach a decision on this question. Consequently, I consider both theories to have done equally well in predicting the actual behavior of Arab armies in this category. By contrast, the evidence clearly does not fulfill the predictions of the Soviet-system theory, which predicts that Arab armies would have preferred to sustain a high OPTEMPO, especially in offensive operations, in accord with Soviet practices.

### **Attention to Offensive and Defensive Operations**

It is difficult to say that Arab armies were excessively committed to either offensive or defensive operations. Arab militaries opted for offensive or defensive operations based on their objectives and the specifics of the war, rather than a doctrinal predilection for one or the other. While there certainly were Arab generals who were

convinced that the best strategy was to attack their foe--even though they may have lacked the understanding or the capability to do it properly--it is difficult to find a "cult of the offensive" among Arab militaries. For the most part, those Arab generals who did press for offensive operations did so because they felt it was the best course of action available to them given their objectives. For instance, the Iraqi high command was desperate to mount a general offensive against the Kurds in 1963-1964 because they thought (correctly) that Qasim's defensive strategy would never succeed. Likewise, many Egyptian generals pressed Isma'il to continue the attack after their initial successes on 6-9 October 1973 because they believed (correctly) that the Israelis were reeling and (probably wrongly) believed that by continuing their offensive they might have seized the Sinai passes or even defeated the Israelis altogether. In short, there simply were no examples of Arab generals who pressed offensive operations for the sake of offensive operations, nor did Arab armies constantly try to go onto the offensive to defeat a foe.

Arab generals tended to opt to remain on the defensive because it suited their political tasks and the capabilities of the forces at their disposal. The most prescient Arab commanders recognized that their armies were far more effective in static defensive operations than they were when attacking and so employed strategies that allowed them to fight mostly from the defensive. Obviously, General Isma'il's decision to employ a strategic offensive coupled with a tactical defensive was the best example of this. The Iraqi General Staff during the Gulf War concluded that given the badly limited offensive capabilities of their forces, they would do best to remain on the defensive and force the US-led coalition to dig them out of their extensive fortifications in the Kuwaiti Theater. In these instances as well, the preference for defensive operations was entirely driven by the specifics of the situation and the forces available. They were intelligent choices made for rational reasons, rather than a dogmatic attachment to a doctrine that hailed the defensive as the only proper mode of war. Moreover, Arab training focused both on offensive and defensive operations, although in 1967-1973 Egyptian and (especially) Syrian training stressed the attack because of their impending assault on the Israelis.

On a related question, Arab armies on the attack did not try to drive as far into their adversary's operational depth as possible. Arab armies did not try to push as far and as fast as they could without stopping to regroup. In general, Arab offensives were slow-moving and tentative and failed to take advantage of most opportunities to push deeper into their adversaries' operational depth. Some Arab offensives were specifically conceived of as limited operations, such as the Egyptian attack in 1973 and the Iraqi offensives in 1988, and so never had the intention of destroying their enemy's army by deep envelopments and the disruption of their forces in depth. However, on other occasions, such as the Iraqi invasion of Iran in 1980, the Arabs did not even move fast-enough and deep enough to achieve even limited goals. The one exception to this rule was the Syrian assault on the Golan, which did look very much like a Soviet-style offensive intended to penetrate Israeli lines, and then disrupt and destroy Israeli resistance on the Golan through deep, fast-moving penetrations to envelop the entire plateau.

These various conclusions run counter to the predictions of the Soviet-system theory. Just as the Soviets stressed that only offensive operations in war could be decisive and planned to go over to the offensive as soon as they possibly could in battle, the theory predicts that Arab armies would show an excessive attachment to offensive operations. However, the actual historic record results indicates that, unlike the Soviets, the Arabs did not neglect defense and focus all their attention on the attack but favored each when it was appropriate. Particularly damning for the Soviet-system theory is the failure of Arab offensives to rely on fast-moving, deep thrusts into the enemy's operational depth and constant exploitation of gaps in enemy positions. With the exception of Syria's October War offensive, Arab attacks simply did not look like Soviet-style offensives, and were never even planned to look like them. Indeed, the Syrian case is the exception that proves the rule: other Arab offensives looked so little like the Syrian assault on the Golan that it is clear that they were not following the Soviet model.

### **Attention to Air Superiority**

There was no iron-clad rule regarding the efforts made by Arab militaries to secure control of the air--or at least to deny that control to the enemy--across the region and throughout the postwar era. Still a pattern did emerge. Essentially, Arab air forces were lax and haphazard in their attention to air superiority before the Six-Day War. Then, after the Israeli Air Force destroyed the Arab air forces on the ground and went on to wreak havoc on Arab armies, military bases, and economic facilities in that war, the Arabs learned their lesson. Immediately thereafter, the Syrians, Egyptians, Iraqis, Saudis, and Jordanians all began to make strenuous efforts to improve their capability to contest control of the air to the best of their ability. Indeed, during the War of Attrition, Cairo recognized that control of Egyptian airspace was so important that it was willing to turn the air defense mission over to the Russians despite the humiliation of having to trust Egypt's defense to another country.

This pattern does not hold perfectly true, however. The Iraqis did not quite learn the lesson of 1967 and so at the start of the Iran-Iraq War they were unprepared to gain air superiority over Khuzhestan. As a result, they were swept from the sky by the remnants of the Shah's air force on the second day of the war. Over the next eight years, however, the Iraqis too made a determined effort to correct this failing and by the end of the war had deployed enormous numbers of ground-based air defenses, a sophisticated command and control net (the Kari system), and hundreds of new fighters that defeated the Iranians through sheer weight of numbers.

These conclusions do not fulfill the predictions of the Soviet-system theory. Although the Soviet-model theory predicts that Arab militaries would pay close attention to air superiority, this correlation is spurious. At the most superficial level, improvements in the diligence of Arab militaries in trying to gain control over their air space did occur at the same time as those militaries began to adopt Soviet military methods. That is, after the 1967 war the Arabs made a determined effort to improve their air defenses and this coincided with a major increase in the reliance of Egypt and Syria (and to a much lesser extent Iraq) on Soviet practices. However, cause and effect actually were reversed here. The Arabs were stunned by the destruction of their air forces by the Israelis and were determined that this would never happen again, and they adopted Soviet practices in part to try to improve their air-to-air and air-defense capabilities.<sup>15</sup> Thus, it was not that the Arabs first adopted Soviet doctrine and then only because this doctrine stressed gaining air superiority they then made efforts to improve in this area, rather, they wanted to improve their ability to win (or at least contest) air superiority and so they adopted Soviet doctrine. The Iraqi case further supports this point because they too only began to pay more attention to air superiority after they had lost it during the early days of the Iran-Iraq War, and Soviet doctrine played no role at all in Iraqi developments.

### **Unit and Service Coordination**

Cooperation between large entities in Arab military operations has generally been poor. In particular, Arab air forces could not properly coordinate their efforts with Arab armies: Arab air forces provided little close air support, reconnaissance, airlift, or even battlefield air interdiction in support of Arab ground operations. Arab air forces often seemed to be fighting their own wars. Asad's refusal to allow the Syrian Air Force to support the Syrian ground forces fighting in Jordan in 1970 was an extreme case of this problem. Iraqi operations during the Iran-Iraq War were probably a more representative example. Iraqi aircraft generally had little to do with the fighting on the ground and the air force was left to concentrate on its own version of a strategic air campaign against Iranian cities and oil industry. Only on rare occasions did the Iraqi air force make a determined effort to contribute to the fighting on the ground, and usually then only in life

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<sup>15</sup> Of course, the desire to improve their ability to control their air space was only one area in which the Egyptians and Syrians believed that heavier reliance on a Soviet model would aid them.

or death situations such as the two crucial battles of al-Basrah in 1982 and 1987.

Within Arab air forces it is difficult to find instances of poor cooperation among units, however this seems primarily to be a product of the fact that Arab air forces conducted so few operations of even squadron size. The vast majority of Arab air operations consisted of four-ship formations or smaller. In other words, there weren't many operations involving multiple independent combat units that would have given rise to potential problems with coordination. On those rare occasions when Arab air forces did attempt larger operations they failed badly.

By contrast, there is ample evidence to indicate that unit coordination among Arab armies was poor. Arab field armies, divisions, and even brigades had great difficulty fighting together as whole entities. Large combat formations could not synchronize their actions with one another and took long periods of time to come to one another's aid. Most combat formations single-mindedly focused on their own missions and failed to recognize the importance of supporting neighboring formations to achieve their goals, or even to watch that gaps did not open up between them. Units also failed to recognize and act according to the larger missions and responsibilities of their superior formations, with the result that broader goals often were not accomplished because tactical formations were too focused on achieving their specific objectives regardless of battlefield developments. Many of the problems that eventually halted Egypt's offensive in 1973 can be traced to this pattern of behavior. For example, the Second and Third Armies failed to coordinate their sector boundaries, and the 16th Infantry Division of the Second Army neglected to cover its right flank because it was mostly concerned with its mission of attacking forward to the artillery road. These problems created the gap between 16th Infantry Division and the Great Bitter Lake, which the Israelis used to turn Second Army's flank and cross the Suez. Likewise, during the initial Egyptian offensive, Egyptian brigades and divisions could not move in unison, allowing Israeli tactical formations to make sudden flank attacks when one unit advanced ahead of its neighbors. Other examples of these problems would include the inability of Syrian brigades and brigade-groups to coordinate their actions on the Golan in 1967, as well as the inability of Iraqi brigades and even battalions to coordinate their actions both in Kurdistan in the 1960s and against Israel in 1973. The failure of Egyptian tactical forces in Yemen to support one another and cooperate in sweep operations ultimately proved to be one of the fatal flaws in their failed counterinsurgency campaign.

These findings conform broadly to the predictions of the Arab-culture theory, as well as those of both the commissariat and praetorian variants of the politicization theory, all of which predict an inability for services and units to cooperate properly. However, if one peers beneath the general predictions to examine the sub-predictions, the evidence appears to strongly support the Arab-culture theory while providing little support for either variant of politicization. Specifically, the Arab-culture theory predicts that coordination would break down primarily because commanders would not understand how their actions fit into a larger scheme, or that their actions had to mesh with those of their neighbors so as to achieve the general goals of the operation even if this meant sacrificing tactical objectives. The theory predicts that Arab formations would concentrate on their specific missions to the detriment of everything else, and would not sacrifice this to aid another unit in the accomplishment of its mission, or to better accomplish the broader goal of its superior formation. On the other hand, both politicization variants predict that Arab militaries would suffer from the inability of services and units to cooperate as a result of rivalries and mistrust among unit commanders. Arab military history 1945-1991 fails to provide empirical evidence of this sort of behavior. Although poor cooperation among Arab services and units was the rule, it was the exception when this problem resulted from rivalries and mistrust. Asad's withholding of the Syrian Air Force in 1970, and possibly some personal animosities among Syrian commanders on the Golan in 1967, are the only two examples of this sort of behavior. Furthermore, poor unit and service coordination was a constant across the

region and over time, as predicted by the Arab-culture theory. It did not fluctuate with changes in the prevalence of commissarism or praetorianism, thereby contradicting crucial predications of these theories.

### **Willingness to Take Casualties**

Overall, the Arab armed forces did not necessarily show a propensity to risk heavy losses to achieve battlefield objectives. In fact, Arab armies generally were quite hesitant in risking casualties, and even canceled or restructured operations in detrimental ways to limit the potential for casualties. Syrian and Egyptian senior commanders in 1973 actually had to encourage their subordinates to be more willing to sacrifice their men to try to achieve their objectives because in the past they would not risk losses to fulfill their mission.

Arab militaries have generally tended to be very sensitive to casualties, and often have shaped their military operations to minimize losses. There have only been a few instances in the history of the Middle East when Arab states were willing to incur heavy casualties to secure a goal. For example, Cairo's willingness to suffer over 30,000 casualties in the initial assault across the Suez in 1973 did not dissuade it from conducting the attack, but this is the exception to the rule. Saudi Arabia and Jordan have traditionally been loathe to sustain heavy personnel casualties, in part because of their small populations. Throughout the Iran-Iraq War, Baghdad went to great lengths to minimize casualties, in part because Saddam feared the domestic political ramifications of a heavy death toll. Indeed, Iraq frequently was willing to sacrifice the possibility of victory on the battlefield to avoid the risk of numerous casualties.<sup>16</sup>

This evidence strongly disconfirms the prediction of the Soviet-model theory that Arab commanders should be willing to incur heavy losses to secure military objectives. The unwillingness of Arab militaries to sustain such losses in conducting their battles suggests either that the Arabs never actually implemented Soviet tactics as intended, or that the Arabs were not relying on Soviet methods to the extent suggested by those who claim this to be the major source of their ineffectiveness on the battlefield.

In addition, these results further discredit the notion averred by some Western journalists during the early 1980s that Islam did not value human life and that a willingness to suffer appalling casualties was the central element of a proposed "Islamic Way of War."<sup>17</sup> As noted in Chapter 2, I found no such undervaluing of human life in the sociological literature on the Arab world, leading me to disregard this theory. The historical evidence further dispels this notion that Arab Islamic militaries are unconcerned by casualties in pursuit of their objectives. All of the Arab armies carefully weighed potential losses against prospective gains, and frequently concluded that even minor losses were not worth potentially significant gains. Indeed, Western armies of the twentieth century have generally shown a far greater disregard for casualties than have Arab armed forces--witness the carnage of Verdun and the Somme.

### **Initial Conclusions**

The above assessments demonstrate varying degrees of support for each of the contending explanations for poor Arab military performance since World War II. First, the tests demonstrate very strong support for the Arab-culture theory. Of the 24 categories in which the theory should have demonstrated congruence with actual Arab military history, it was able to do so in 21. Moreover, in those categories related to

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<sup>16</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 142 and 199; Stephen C. Pelletiere, Douglas V. Johnson, and Leif Rosenberger, *Iraqi Power and US Security in the Middle East*, (Carlisle, Pa: US Army War College, 1990), p. 13.

<sup>17</sup> See for example, Robert Harkavy, "The Lessons of Recent Wars: Toward Comparative Analysis," in Robert Harkavy and Stephanie Neuman eds., *The Lessons of Recent Wars in the Third World*, Vol. 2, (Lexington, MA: Lexington Books, 1987). p. 17.



tactical leadership (and thus to mobile armored warfare) such as initiative and innovation, ability to conduct ad hoc operations, information flows along the chain of command, use of tactical maneuver, tactical intelligence, combined arms operations, use of armor and artillery, air-to-air and air-to-ground operations, unit coordination, and centralization, the theory performed extremely well. Likewise, in many of the categories related to technical skills, such as employment of armor and artillery, air-to-air and air-to-ground operations, maintenance and repair, assimilation of equipment, and technical support to the military, the theory also did well. In these cases, even the exceptions generally proved the rule. Of the three categories of military effectiveness in which Arab military history failed to conform to the predictions of the Arab-culture theory, two of them--logistics and combat engineering--were not adequately explained by any of the other theories either. Moreover, the most plausible explanation for the unexpectedly good performance of Arab logistics, the "river-culture" theory, is simply a repair of the culture argument to allow for sub-cultural differences. All in all, 21 of 24 is very good: in general, the more areas a theory can explain, the better the theory, and none of the other theories performed nearly as well.

The theory that low levels of socio-economic development were responsible for poor Arab military performance did the next best in these tests. Of the 15 areas in which the theory should have shown congruence, it did so in ten. In particular, in many of the categories related to technical skills and familiarity with machinery, such as employment of armor and artillery, air-to-air and air-to-ground operations, maintenance and repair, assimilation of equipment, and technical support to the military, the theory did very well. Moreover, with regard to the ability of Arab soldiers to benefit from military training, basically a reflection of their education level, the conclusions were unclear because of insufficient evidence, although anecdotes suggested that the predictions of the underdevelopment theory may be correct. Finally, although the underdevelopment theory cannot explain the experience of Arab combat engineers or logistical support, as noted above, neither can the Arab culture theory. Of course, if the "river-culture" theory is accurate, this would be a blow to the underdevelopment theory.

Of the three variants of politicization of the military, Commissarism did best, although the evidence supported its predictions in only seven of 19 categories. The greatest problem for the commissarist variant was that it predicted consistently poor generalship--including the categories of strategic-level creativity, initiative, use of maneuver, ad hoc operations, combined arms, intelligence, and planning--during this period, yet the evidence showed no such pattern. In addition, although commissarism did successfully predict that Arab militaries would suffer from poor unit and service coordination, it did so for the wrong reasons, hence this cannot be counted in its favor. Commissarism's greatest strengths were that the quality of generalship and various other patterns of military effectiveness related to it, while not consistently poor, did show a correlation with fluctuations in commissarism.

Praetorianism and palace guardism fared much worse. Although at a superficial level these two variants did reasonably well, they failed on their two most important predictions. First, both theories predicted sudden improvements in Arab military effectiveness as their impact declined--palace-guardism in the 1950s and 1960s, praetorianism in the 1960s and early 1970s--but patterns of Arab military effectiveness remained poor, strongly indicating these theories were not adequate explanations. Second, the key predictions of these variants of politicization regard the emphasis and diligence of Arab training and these were not supported by the historical evidence. Consequently, the praetorian and palace-guard variants of politicization demonstrated little explanatory power.

The Soviet-system theory did least well of all. The theory showed congruence with actual Arab military history in only nine of 26 areas where such congruence was predicted. Furthermore, most of these tests were passed at only a superficial level. That is to say, although Arab operations often conformed to patterns predicted by the theory,



**Table 11a. Summary of Patterns of Arab Military Effectiveness since 1945.**

Prediction	Arab Culture	Politicization of the Military			Soviet System	SED Level	Actual Findings
		Commis sarism	Praetor ianism	Palace Guardism			
Tactical creativity	<b>Poor</b>				<b>Poor</b>		<b>Poor</b>
Strategic creativity		Poor					<b>Uneven</b>
Information flows	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>				<b>Poor</b>
Tactical initiative	<b>Poor</b>				<b>Poor</b>		<b>Poor</b>
Strategic initiative		Poor					<b>Uneven</b>
Centralization/Delegation	<b>Poor</b>	<b>Poor</b>			<b>Poor</b>		<b>Poor</b>
Simplicity of Chain of Command		Poor					<b>Uneven</b>
Tactical use of maneuver	<b>Poor</b>			<b>Poor</b>	Good		<b>Poor</b>
Strategic use of maneuver		Poor		Poor	Good		<b>Uneven</b>
Employment of armor	<b>Poor</b>			<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>
Employment of artillery	<b>Poor</b>			<b>Poor</b>	Uneven	<b>Poor</b>	<b>Poor</b>
Air-to-air combat skills	<b>Poor</b>	<b>Poor</b>		<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>
Air-to-ground operations	<b>Poor</b>	<b>Poor</b>		<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>
Ad hoc operations	<b>Poor</b>	<b>Poor</b>		<b>Poor</b>	Good		<b>Poor</b>
Set-piece operations	<b>Adequate</b>	Poor		Poor	Good*		<b>Adequate</b>
Combined arms	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	Good	<b>Poor</b>	<b>Poor</b>
Unit cohesion	Uneven	Poor	Poor				<b>Good</b>
Personal Bravery	<b>Good</b>	Poor					<b>Good</b>
Maintenance and repair	<b>Poor</b>				Good	<b>Poor</b>	<b>Poor</b>
Assimilation of equipment	<b>Poor</b>					<b>Poor</b>	<b>Poor</b>
Logistics	Poor				Good	Poor	<b>Uneven</b>
Combat engineers	Poor				<b>Good</b>	Poor	<b>Good</b>
Technical support	<b>Poor</b>				Good	<b>Poor</b>	<b>Poor</b>
Tactical intelligence	<b>Poor</b>				Uneven	Inadequate	<b>Poor</b>
Strategic intelligence		Poor			Good		<b>Uneven</b>
Operational Security	<b>Good</b>				<b>Good</b>		<b>Good</b>
Tactical leadership	<b>Poor</b>			Uneven	<b>Poor</b>		<b>Poor</b>
Strategic leadership		Poor		<b>Uneven</b>			<b>Uneven</b>
Ability to Plan and Execute Complex Operations		Poor			Good*	Poor	<b>Uneven</b>
Officer rotations		Excessive					<b>Unclear</b>
Morale (at start of the war)		Poor	Poor	Poor			<b>Adequate</b>
Attention to training			Poor				<b>Uneven</b>
Emphasis of training				Misguided			<b>Adequate</b>
Ability of soldiers to benefit from military training						<b>Poor</b>	<b>Poor</b>
Preferred operational tempo	<b>Slow</b>				Fast	<b>Slow</b>	<b>Slow</b>
Attention to offensive operations					Excessive		<b>Adequate</b>
Attention to defensive operations					Poor		<b>Adequate</b>
Attention to air superiority					Good		<b>Uneven</b>
Unit and service coordination	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>				<b>Poor</b>
Willingness to take casualties					High		<b>Low</b>

A blank square indicates the theory does not necessarily make any prediction in this category.

Boldface type indicates that this prediction was fulfilled, at least at a superficial level, by actual Arab military history.

\* The pattern of behavior among Arab armies actually conformed fairly well to the pattern predicted by the Soviet-system theory in that Arab militaries relying on Soviet methods often did better in these areas than others that did not employ a Soviet model of operations.

the fact that these patterns held constant both for Arab militaries that relied on Soviet methods as well as those that did not clearly demonstrated that the correlation was spurious. The Soviet-system theory is not totally without value because it does appear to explain some of the variance in air-to-air combat in that some Arab air forces did suffer from their reliance on Soviet-style GCI. Interestingly, the predictions of the Soviet-system theory were best confirmed by some of the positive elements of Arab military effectiveness. For example, the improvement in set-piece operations and the planning of complex military operations by the Egyptians, Syrians, and possibly the Iraqis, appear related to their greater contact with the Soviets after the Six-Day War. Thus in direct contradiction to the Soviet-system theory, Arab problems do not appear to have been caused by their reliance on Soviet methods, and if anything, they were helped by it.

### **The Major Causes of Arab Defeat, 1945-1991**

In the preceding section I detailed the performance of Arab armies and air forces between 1945 and 1991 in 40 different categories of military effectiveness. In some I noted consistent patterns of poor performance, in others patterns of good performance, in others adequate performance, and in still others no particular patterns at all. While very useful, such an accounting can only take us so far in attempting to gauge the sources of Arab military ineffectiveness since 1945 and the importance of Arab culture among them. Another important piece of the puzzle lies in answering the question, "which factors have proven most detrimental to Arab armed forces in their wars?" After all, theories that purport to explain this riddle must demonstrate not only that they accurately predict patterns of ineffectiveness, but that the patterns they predict have actually been the most detrimental to the Arab militaries. (Table 11b lists the most important of these factors and in which of the Middle East wars they played a role in deciding the outcome.)

#### **Strategic vs. Tactical Performance**

Many apologists for Arab military performance make the claim that it was Arab generalship, not the armies themselves, that were responsible for the various military disasters the Arabs suffered. After each major Arab defeat, someone has argued that blame for the loss can only be pinned on the political "hacks" of the particular high command, and that the Arab military would have fared much better--and might well have won--if it had been commanded by competent generals.<sup>18</sup> It is certainly true that many of the generals commanding Arab armies were appointed for loyalty rather than ability, that many performed abysmally, and that these poor performances had a major impact on the outcome of the fighting. However, the historical data does not demonstrate that by simply altering this variable, all of the Arabs' military problems would have been solved.

In most of their wars, the combat performance of the armies and air forces themselves were so poor that it would have required a true military genius to have markedly improved the outcome for the Arabs. Arab soldiers generally did all that could have been asked of them: they carried out their orders, they attacked with determination, they stood their ground resolutely, and they fought bravely. On the other hand, Arab generalship varied widely, from utter incompetence to real skill. Yet Arab tactical leadership remained a constant, glaring weakness. The Israelis recognized it as the greatest weakness of Arab armies and they consciously structured their operations to

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<sup>18</sup> For example, see El Edroos, p. 300. Cordesman and Wagner, *The Iran-Iraq War*, p. 412; and O'Ballance *The Gulf War*, p. 49, also tend to lay blame for poor Iraqi performance during the Iran-Iraq war mostly on the Iraqi high command. However, as Wagner ("Iraq: A Military Assessment," pp. 68-73) points out, Iraqi military performance was appalling from top to bottom and it is doubtful that better generalship alone would have significantly altered the outcome.

**Table 11b. Primary Causes of Arab Defeats/Narrow Victories since 1945**

Engagement	Poor Tactical Leadership	Poor Strategic Leadership	Poor Weapons Handling	Enemy Airpower	Unique Events	Poor Force Ratio	Inferior Weapons
Egypt, 1948	X		X				
Iraq, 1948	X		X				
Jordan, 1948							
Syria, 1948	X						
Egypt, 1956	X		X		X	X	
Jordan, 1956	X						
Iraq, 1961-1970	X		X				
Egypt, 1962-1967	X		X				
Jordan, 1966	X					X	X
Egypt, 1967	X	X	X	X			
Jordan, 1967	X		X	X			
Syria, 1967	X	X		X			
Egypt, 1968-1970	X		X				
Jordan, 1968				X			
Jordan, 1970	X		X			X	
Syria, 1970	X		X	X	X		
Egypt, 1973	X		X				
Iraq, 1973	X	X	X				
Jordan, 1973	X		X		X		
Syria, 1973	X		X	X			
Iraq, 1974-1975	X		X		X		
Syria, 1976	X	X	X				
Iraq, 1980-1984	X	X	X				
Syria, 1982	X		X	X		X	X
Iraq, 1985-1988	X		X		X		
Iraq, 1990-1991	X		X	X		X	X
Egypt, 1991	X		X				
Saudi Arabia, 1991	X	X	X				

force the Arabs to conduct fluid maneuver battles in which the burden of leadership would inevitably devolve upon the junior officers on both sides. The Israelis were certain that in these kinds of battles they would prevail--and they were proven right in this belief time and again.

Arab military fortunes varied to some degree from 1945 to 1991, ranging from the catastrophic defeats of Egypt, Jordan and Syria in the Six-Day war and of Iraq in the Gulf War, to the modest victories of Iraq at the end of the Iran-Iraq war and Egypt during the first few days of the October War. To some extent, these fluctuations reflected the varying ability of Arab generals. The most competent Arab generals were responsible for the most successful Arab military achievements. Thus the two most competent senior officer cadres the Arabs were able to assemble--those of Egypt in 1967-1973 and Iraq in 1986-1991--were responsible for the Arabs' greatest successes. Similarly, many of the worst defeats suffered by Arab armies came under the direction of the worst commanders in Arab military history. On this count, Iraqi generalship during the first two years of the Iran-Iraq War and Egyptian direction of the Six-Day War stand out as excellent examples.

The failings of Arab tactical leadership, however, accounted for far more of the variance (or lack thereof) in Arab military fortunes than did Arab strategic leadership.

While Arab generalship has fluctuated considerably over the course of Middle Eastern wars, the poor performance of the units under their command has remained a constant, compounding their mistakes and confounding their successes. What is remarkable about the Iraqi offensives of 1988 and 1990, the Egyptian assault across Suez in 1973, and other Arab "successes," is the skill and effort required to produce such modest achievements. The planning and preparations conducted by the Egyptian and Iraqi general staffs for these operations were tremendous, their operational concepts were superb, and their advantages in terms of surprise, firepower and sheer numbers were overwhelming, yet they actually achieved very little: the Egyptians occupied a bridgehead no more than 10-12 kilometers deep on the east bank of the canal, and the Iraqis were able to eliminate the tattered remnants of the Iranian army and then overrun a virtually undefended Kuwait. Given the skill shown by their generals in carefully preparing these battles, it is noteworthy that they achieved so little. Indeed, the most successful Arab generals of recent wars have been those who, like the Egyptians in 1973 and the Iraqis in 1988, recognized the very limited military effectiveness of their forces and devised their strategies accordingly.

There were also numerous instances when Arab generalship was more than adequate yet their armies were defeated badly. Egyptian leadership in 1948 and 1956, Iraqi leadership in both Kurdish wars after about 1964-65, Jordanian leadership in 1967, and Syrian leadership in 1973 and again in 1982, were all quite competent. They could hardly have been considered brilliant, but most of their decisions were very reasonable and could easily have produced a victory, but they never came close. In every case, the tactical performance of the forces under their command was so bad that they led inevitably to defeat, sometimes even disastrous defeat. Thus when Arab generalship was very good, they could achieve only marginal, fleeting successes, but when Arab generalship was simply adequate, they invariably were beaten, and usually beaten badly. Consequently, the failings of Arab tactical leadership must be considered to have been the most important cause of the consistently poor showing of Arab armies, while problems with strategic leadership must be considered only a secondary influence.

### **Limited Technical Skills**

Another crucial problem Arab forces experienced in virtually all of their wars since 1945 was an inability to deal with technology and machinery. In virtually every category of military effectiveness related to the handling of machinery or electronics, Arab armies and air forces fared poorly. These problems hindered them in virtually every war they fought by contributing to the poor performance of Arab tactical forces. One reason that Arab tactical formations were almost never able to defeat enemy units of equal size was that the Arab units simply could not take full advantage of the capabilities of their weapons and other equipment, nor could they properly coordinate the actions of large numbers of men and machines.

Nevertheless, it is clear that while their problems in handling machinery and technology were a major source of the ineffectiveness of Arab forces--and probably a more significant influence than inconsistent Arab generalship--they had considerably less impact than problems derived from poor tactical leadership. Ultimately, as debilitating as it was that Arab personnel could not employ their weaponry as well as the enemy could handle his, it was usually the case that this was almost irrelevant because the failings of Arab junior officers left their units in such precarious situations that defeat was guaranteed no matter how well or how poorly they used their weapons. Perhaps the best illustration of this problem was Jordanian performance on the West Bank in 1967. Jordanian infantry units handled their weapons very well but were defeated quickly by the Israelis because Jordanian officers would not show the initiative, creativity, or flexibility to reorient their lines or else counterattack Israeli penetrations. Consequently, it did not matter that the Jordanians were quite deadly with their small arms because their tactical leadership was so bad. Similarly, in the tank battles on the West Bank, the

problem was not just that the Jordanians could not handle their Pattons as well as the Israelis could use their Shermans, but that Jordanian junior officers did not know what they were doing. Thus in the Dotan valley, along the Tubas-Jenin road, and at Tel al-Ful Jordanian armor was beaten because of command failures, not poor tank handling. The exception that proves this rule is the 40th Armored Brigade, the only Jordanian unit to actually fight the Israelis to a draw, not because its troops could handle their equipment better, but because its leadership was so much better than that of other Jordanian units.

Syrian military history offers two more examples of this distinction. First, the personnel of the 77th Tank Battalion of Israel's elite 7th Armored Brigade defending Red Ridge were incomparably better with their Centurions than the Syrians of the 7th Infantry Division and Republican Guards were with their vast hordes of armored vehicles. However, the Syrians did not lose because they were worse marksman than the Israelis: their deficiencies in weapons-handling were more than compensated for by their enormous numeric advantages (generally on the order of at least a 5:1 advantage in tanks). The Syrians lost because they were outmaneuvered and "outthought" by their Israeli counterparts at every turn. Israeli junior officers showed tremendous flexibility, creativity, and aggressiveness that allowed them to consistently maul much larger Syrian forces. This, far more than their superior tank-handling skills, is why the Israelis defeated the Syrians. Second, there is the example of Syrian performance in the air battles over Lebanon in 1982. While it is certainly true that Syrian pilots clearly could not take full advantage of the capabilities of their MiGs, this is beside the point. Once the Israelis had deprived them of their GCI guidance, Syrian pilots showed so little adaptability or capacity for independent action that their inferior technology and their inferior abilities to handle that technology were essentially irrelevant. As the Israelis noted almost incredulously, "They could have flown the best fighter in the world, but if they flew it the way they were flying we would have shot them down in exactly the same way."<sup>19</sup>

Egyptian and Iraqi experience adds other examples. For instance, in 1981 and 1982 when Iran battered the Iraqi army and drove it out of Khuzhestan, the problem for Iraq clearly was not related to their equipment. Iran was so badly outnumbered by Iraq in every category of military hardware that it did not matter how poorly Iraqi tank crews handled their T-55s and T-62s, because there were simply too few Iranian Chieftains and M-60s to oppose them. While the Iranians were better than the Iraqis in employing their weaponry, the gap was not nearly so great as that between many of the Arab armies and Israel, for example. Nevertheless, the Iraqis were humiliated by the under-equipped Iranians, not because they could not handle their equipment, but because their tactical field commanders had no idea what they were doing. Here as well, the Iraqis were beaten because their tactical leadership showed a crippling dearth of initiative, adaptability, creativity, maneuver, combined arms integration, and independent judgment. Iraqi formations generally sat passively while Iranian units punched through weakly-held sectors and then enveloped adjacent armored and mechanized formations. Finally, Egypt's problems in Yemen in the 1960s also illustrate the greater importance of tactical leadership failings over problems with technology. As with Iraq against Iran in the early 1980s, Egypt in Yemen possessed overwhelming advantages in weaponry over its adversaries. No matter how poorly the Egyptians handled their equipment, they still had a huge advantage over the Yemenis, but this advantage mattered little. Ultimately, the Egyptians lost because they could not defeat the Royalists in small unit engagements. Egyptian tactical commanders could not act independent of higher echelon guidance, they could not coordinate their actions with those of other units, and they could not respond quickly or creatively to Royalist ambushes. This, not their difficulties in handling weapons and other machinery, was the cause of their defeat in Yemen. From these various examples (and countless others recounted in Part II), it is clear that the limitations

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<sup>19</sup> Quoted in Cordesman and Wagner, *The Arab-Israeli Conflicts*, p. 197.

of their tactical leaders were more detrimental to Arab armies and air forces than their limited technical skills in the various Middle East wars since 1945.

### **Other Factors Unrelated to Arab Military Effectiveness**

Generalship, tactical leadership, and technical skills were not the only factors that proved decisive in Arab military operations. Other elements also often contributed to the outcome of the conflicts. For example, in several Middle East wars, the contest went against the Arab states in part because their opponent gained air superiority and then was able to apply its air force unilaterally against the Arab armies. While not a common phenomenon, this problem played a role in the defeat of Jordan, Egypt and Syria by Israel in the Six-Day War; in Syria's defeat by Jordan in 1970; in Syria's defeat by Israel in 1973 and 1982; and in Iraq's defeat by the US-led coalition in 1991. In two of these cases, those of Syria in 1970 and Iraq in 1991, the impact of enemy airpower was probably the decisive element in the war. On the other hand, as described in the historical chapters of Part II, Israeli airpower generally was not decisive in itself, but instead magnified the scope and extent of Arab defeat. Consequently, enemy airpower was an important factor in Middle East conflicts between 1945 and 1991, but not as important as Arab problems with tactical leadership, technical skills, and generalship.

In other wars, events unique to the conflict played an important role in deciding its outcome. Sometimes, these unique events took the form of outside intervention. For example, British and French participation in the 1956 Sinai-Suez War was a major factor in Egypt's defeat, just as Iranian intervention in the Second Kurdish War of 1974-1975 stalemated Iraq until the Algiers accord. Other factors were even more circumstance specific. For example, Asad's refusal to commit the Syrian Air Force to the invasion of Jordan in 1970, and Jordan's lack of real commitment to the fighting in the October War. While the importance of these events varied, in truth, there were comparatively few such events that had a really significant impact on the course of the fighting. For instance, both Egypt's misleading of Jordan in 1967 and the premature Radio Damascus broadcast that al-Qunaytarah had fallen, count as unique events that influenced the course of the war, but ultimately were not major determinants of its outcome.

### **Dogs that did not Bark**

Finally, it is worth noting several factors that surprisingly did not have much real effect on the outcome of most of the Middle East wars. First, the quantitative balance of forces mattered very little in these wars. For the most part, Arab armed forces enjoyed at least parity, and often superiority, over their foes yet mostly lost. In those few instances when Arab armies and air forces were significantly outnumbered, the poor force ratio still was not usually a decisive factor. Numbers only seemed to matter when Arab militaries had enormous imbalances in their favor, in which case this advantage often allowed them to partially offset some of their difficulties in tactical leadership, technical skills, and generalship. However, even in these cases, massively favorable force ratios produced only modestly better results for the Arabs. Once again, the best examples of this trend are the Egyptian and Syrian offensives against Israel in 1973 and the Iraqi offensives against Iran in 1988, in which the Arabs had colossal advantages in men and materiel and still achieved only modest, fleeting victories.

The qualitative balance of equipment was another such factor that had little impact on Middle East wars. As with quantity, in the vast majority of their wars, Arab armed forces possessed weapons on a par or better than those of their opponent. Nevertheless, the Arabs still lost most of their wars--and lost many of them badly--and those they won were not exactly smashing successes. In some cases, the Arab armies had much better weaponry than their opponents but could not capitalize on this advantage. For example, in the War of Israeli Independence, the Yemeni Civil War, the Kurdish Wars, and the Iran-Iraq War (especially in its later phases) the equipment of the Arab armies greatly outclassed that of their opponents.

### Subsequent Conclusions

The discussion of the importance of various factors in deciding the outcome of the various Middle East wars sheds further light on the explanatory power of the various theories under consideration. Essentially, this additional information appears to confirm the initial conclusions from the simple congruence tests discussed earlier in this chapter. The Arab-culture theory appears to have the greatest explanatory power, followed closely by the underdevelopment theory and then the commissarist variant of politicization of the military. Praetorianism and palace guardism have little ability to explain Arab military behavior since 1945, while the Soviet-system theory not only fails to adequately explain Arab military problems but actually helps explain some areas of strength in Arab military operations.

Overall, the Arab-culture theory appears to have performed best of all the theories. In addition to its excellent record in predicting the actual patterns of Arab military effectiveness, the Arab-culture theory makes the strongest predictions regarding Arab tactical leadership. Only the Soviet-system theory predicts problems at tactical levels in the same manner as the Arab-culture theory, but the Soviet-system theory was badly discredited by the fact that Arab military effectiveness did not correlate with patterns of rising and falling Soviet influence on Arab military doctrines. Consequently, the fact that only the Arab-culture theory can fully explain the consistently poor performance of Arab junior officers, and the fact that this has probably been the single most important problem for Arab states at war since 1945, strongly supports the claims of the Arab-culture theory. In addition, the Arab-culture theory also does well in predicting problems handling technology and machinery, which was probably the next most important factor shaping Arab military fortunes during this period.

The underdevelopment theory fared next best. As noted above, its predictions were largely fulfilled, especially in those categories pertaining to technical skills and the handling of machinery. Moreover, the fact that problems arising from the absence of these technical skills had an important role in most Middle East wars since 1945 further suggests that underdevelopment was an important source of Arab military problems during the postwar era. However, the underdevelopment theory makes only modest contributions in explaining the other problems that have hindered the Arabs at war during the modern era. In particular, because the underdevelopment theory makes few predictions regarding tactical leadership, and because this was the most important hindrance to the Arabs, the underdevelopment theory does not explain Arab military ineffectiveness as well as the Arab-culture theory.

Commissarism ranks third once again, but a stronger third than before. Commissarism provides the best explanation for Arab problems at strategic command levels. Although there was no *consistent* pattern of poor Arab generalship, it is the case that when Arab strategic leadership was poor it was often the result of commissarism. Since poor generalship was a major contributor to several catastrophic Arab defeats, and commissarism best explains the poor generalship, commissarism must get credit for explaining a significant amount of the variance in these cases. Second, as noted in Chapter 3, commissarism does have some effect on tactical command. While its impact on junior officers is much less than its influence on senior levels--and much less than culture's influence on junior levels--it must also be credited for this secondary impact on tactical leadership. Given the importance of poor tactical leadership to Arab military fortunes since 1945, even this secondary influence must be considered noteworthy.

Palace guardism, praetorianism, and reliance on Soviet methods still appear to contribute little to our understanding of Arab military performance since 1945. Most problematic for these theories is the fact that Arab military effectiveness did not rise and

fall--or fall and rise--with the changing influence of these variables. Although palace-guardism and, to a lesser extent, praetorianism do appear to explain some of the problems experienced by Arab militaries early on in the postwar period, they cannot explain Arab military ineffectiveness more generally. The Soviet-system theory offers little or nothing in terms of explaining Arab military ineffectiveness, but does appear to provide some understanding of those areas of Arab military effectiveness such as set-piece operations and planning large, complex operations.



## Chapter 12

### Testing the Transmission Mechanism

It is not enough simply to demonstrate congruence between the predictions of the theory of the cultural origins of Arab military ineffectiveness and actual Arab combat performance from 1945 to 1991. It is also necessary to demonstrate the causal link by which the patterns of culturally-regular behavior become corresponding patterns of behavior on the battlefield. Therefore, the next question that must be addressed is, how is it that the behavioral traits of the dominant Arab culture identified in Chapter 2 are transmitted to the soldiers and officers who comprise Arab armies and air forces?

The Arab-culture theory predicts that this causal link should be found in the Arab educational system and Arab military training practices, this chapter evaluates that prediction. According to the Arab-culture theory, this causal process--what I refer to as the "transmission mechanism"--is to be found in the informal and formal education of Arab military personnel during their maturation from child to adult as well as their formal military training once they have been inducted into the armed forces. Culture, as I define it, is *learned* behavior. Individuals are not born with embedded cultural patterns, rather they are taught them from their parents, relatives, friends, teachers, etc. Thus the theory predicts that the informal and formal training methods of the Arabs will inculcate and reinforce patterns of behavior consistent with the dominant Arab culture. Consequently, we should find that Arab educational methods--both in the home and at school--instill culturally-regular values and patterns of behavior in all Arab children. Moreover, we should find that these same methods are employed by Arab military training personnel, thereby reinforcing in Arab soldiers and officers the values and behavior first learned in the family and at school. Finally, we should find that because the educational method is derived from the culture, and the culture will by definition resist change, the educational method should resist change too.

This chapter tests these important predictions of the Arab-culture theory. It asks the question, "are Arab military personnel taught to think and behave in a manner that accords with the norms and values of the dominant Arab culture?" If it is the case that Arab educational methods, both formal and informal, civilian and military, teach individuals to act in conformity with Arab cultural patterns throughout the course of their development, this would be a very powerful argument in favor of the Arab-culture theory. After all, if Arab personnel are taught to behave in a certain manner all their lives, how could one expect them to do otherwise in the midst of combat when there is little opportunity to think rationally and officers and troops alike tend to fall back on what they know best? Moreover, it would be a powerful argument against the various competing theories. Both the Soviet-model theory and the three variants of politicization claim that Arabs behave in certain ways on the battlefield because of incentive systems found in the military that encourage certain kinds of actions and not others.<sup>1</sup> However, if the Arab-culture theory's transmission mechanism can be proven, this would demonstrate that Arab personnel bring their own "internal" incentive structures to battle--incentive structures

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<sup>1</sup> For instance, commissarism creates an incentive structure by threatening severe punishment for such things as conveying unwanted news and acting independently and aggressively, while rewarding behavior such as unswerving loyalty and dissimulation..

embedded within them by the lengthy process of education and derived from the values of the dominant culture--which will interact with or even supersede any incentive structures inherent in the military system. Similarly, the underdevelopment theory argues that patterns of Arab performance in combat simply reflect the absence of certain skills and ways of looking at the world that can only be developed by exposure to an industrial society. However, proving the Arab-culture theory's transmission mechanism would demonstrate that it is not so much the *absence* of specific skills and ways of thinking about the world, but the *presence* of other ways of thinking about the world that prompt Arab soldiers and officers to act as they do.

To test whether the transmission mechanism posited by the Arab-culture theory exists and works as the theory claims, this chapter examines the process of education in the Arab world during the period 1945-1991.<sup>2</sup> It begins by considering patterns of child-rearing within Arab families because this is the first--and sometimes only--education Arab children receive. Then it delves into the educational method of Arab schools, including higher educational facilities. Finally it looks at the practices of Arab armed forces in training their troops. The Arab-culture theory predicts that at all three stages, Arab educational methods should be very similar, if not identical, and should work to constantly inculcate the values of the dominant Arab culture. Because the chapter assesses only the explanatory power of the Arab-culture theory it constitutes a test against the null hypothesis, or "two-cornered" test, in Lakatose's terminology. In addition, because it peers into the causal chain by which an input shapes an output--that is, how Arab culture shapes military effectiveness--it employs the process-tracing method.

As a caveat before delving in, the reader should be aware that, by necessity, I must again deal in stereotypical behavior. Because I must generalize across the entire Arab world to capture the most common patterns of behavior, I am forced to gloss over many of the regional, class, national, and other differences in Arab educational practices both across the region and over time. To a certain extent then, these descriptions constitute a gross simplification of education in the Arab world, focusing as they do on the least common denominators among Arab families, schools, and military training. Consequently, it should be understood that these descriptions may or may not apply to any specific Arab family, school, or military training program, and instead describe the regional mean, around which individual experiences are likely to vary.

### **Education Within the Family**

As predicted by the theory, the child-raising practices of most Arab families forcefully ingrained culturally-regular patterns of behavior into Arab children throughout the postwar era. This is important because, despite the establishment of centrally-directed, mass education in most Arab countries beginning in the 1950s and 1960s, the family continued to be the principal instrument of education in the Arab world throughout the period 1945-1991. As Halim Barakat wrote in 1993, "The Arab family continues to be the most significant agency of socialization of the young as functioning members of society."<sup>3</sup> By and large, Arab families emphasized deference and obedience to authority, loyalty to family and friends, and the manipulation of information to avoid shame, while denigrating creativity and imagination, manual labor and technical learning, and the assumption of responsibility by any but the head of the family. Arab educational

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<sup>2</sup> In actuality, the period from about 1920-1945 is of equal importance since many of the Arab soldiers and officers who fought in the 1948 Arab-Israeli war were in their 20s and therefore began their education sometime after the First World War.

<sup>3</sup> Halim Barakat, *The Arab World: Society, Culture, and State*, (Berkeley: University of Ca Press, 1993), p. 118.

methods within the family mostly discouraged generalization and inquisitive learning, instead fostering a passive absorption of knowledge.

Most Middle East sociologists note that the cornerstone of educating a child in Arab families during this period was teaching him or her complete obedience to authority. The Lebanese psychologist 'Ali Zayour, in his monumental study of the *Psychoanalysis of the Arab Ego*, says that the Arab family is "relentless in its repression...The young are brought up to be obedient, well-mannered and subservient to those above them."<sup>4</sup> According to Abdulla Lutfiyya, in Arab families, "The youngster learns early to obey the father's orders without questioning them, and looks at his father as the mighty giant who rules unchallenged in the family's world."<sup>5</sup> "The keynote to the educational process," according to Hamed Ammar in his study of Egyptian village life, "is the eagerness of the adults to create a docile attitude in their children and thus make them acquire 'filial piety.'"<sup>6</sup> Halim Barakat remarks that, "Children are constantly, and on so many kinds of occasions, reminded that they should obey their parents and never answer back or argue with them even in cases where the parents may be wrong. Moreover, obedience to parents and other members of the family is generalized to all kinds of figures of authority be it a teacher, an employer, a president, a leader, etc."<sup>7</sup> Hisham Sharabi states that a son who violated his father's will in Arab society, "is reduced to impotence, he has no rights, owns nothing, and is totally at his father's mercy. . . He learns by painful experience that he can hope to achieve his goal only by submitting to his father's will."<sup>8</sup>

This relentless effort to force children to defer decision-making and judgment to authority figures worked to depress creativity and initiative among Arab youth. In

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<sup>4</sup> Halim Barakat, "Beyond the Always and the Never: A Critique of Social Psychological Interpretations of Arab Society and Culture," in Hisham Sharabi ed., *Theory, Politics and the Arab World: Critical Responses*, (NY: Routledge, 1990), p. 144. Also see, Sania Hamady, *The Temperament and Character of the Arabs*, (NY: Twayne, 1960), p. 70.

<sup>5</sup> Abdulla M. Lutfiyya, "The Family," in Abdulla M. Lutfiyya and Charles W. Churchill eds., *Readings in Arab Middle Eastern Studies and Cultures*, (The Hague: Mouton, 1970), pp. 518-519.

<sup>6</sup> Hamed Ammar, *Growing Up in An Egyptian Village: Silwa, Province of Aswan*, (NY: Octagon Books, 1973), p. 127.

<sup>7</sup> Halim Barakat, "Socioeconomic, Cultural and Personality Forces Determining Development in Arab Society," in Saad Eddin Ibrahim and Nicholas S. Hopkins, *Arab Society in Transition: A Reader*, (Malta: Interprint [Malta] Ltd., 1977), p. 680.

<sup>8</sup> Hisham Sharabi, *Neopatriarchy: A Theory of Distorted Change in Arab Society*, (Oxford: Oxford University Press, 1988), p. 47. On this point, see also, Ammar, pp. 50, 52, 127; Barakat, *The Arab World*, p. 23; Barakat, "Between the Always and the Never," p. 146; Barakat, "Socioeconomic, Cultural and Personality Forces Determining Development in Arab Society," in Ibrahim and Hopkins, p. 680; Morroe Berger, *The Arab World Today*, (NY: Anchor, 1962), p. 113; Jacques Berque, *The Arabs*, (NY: Praeger, 1965), pp. 103; Leonard Binder, "Egypt: The Integrative Revolution," in Lucian W. Pye and Sidney Verba eds., *Political Culture and Political Development*, (Princeton, NJ: Princeton University Press, 1965), p. 409; Raymond Cohen, *Culture and Conflict in Egyptian-Israeli Relations*, (Bloomington, IN: Indiana University Press, 1990), p. 27; George H. Gardner, "The Arab Middle East: Some Background Interpretations," *The Journal of Social Issues*, Vol. XX, No. 3, 1959, pp. 24-25, 39; Hamady, p. 32; Ibrahim and Hopkins, pp. 83-84; Ilse Lichtenstadter, "An Arab-Egyptian Family," in Lutfiyya and Churchill eds., p. 607; Pegrouhi Najarian, "Adjustment in the Family and Patterns of Family Living," *Journal of Social Issues*, Vol. XV, No. 3, 1959, pp. 35-36; Anthony Pascal, Michael Kennedy, Steven Rosen, *Men and Arms in the Middle East: The Human Factor in Military Modernization*, RAND R-2460-NA, Santa Monica, June 1979, p. 27; Hisham Sharabi in collaboration with Mukhtar Ani, "Impact of Class and Culture on Social Behavior: The Feudal-Bourgeois Family in Arab Society," in L. Carl Brown and Norman Itkowitz eds., *Psychological Dimensions of Near Eastern Studies*, (Princeton, NJ: The Darwin Press, 1977), p. 243; Sharabi, *Neopatriarchy*, pp. 7-20, 44-45; C.A.O. Van Nieuwenhuijze, *Sociology of the Middle East*, (Leiden: E. J. Brill, 1971), pp. 385-386; Unni Wikan, *Life Among the Poor in Cairo*, Translated by Ann Henning, (London: Tavistock Publications, 1980) p. 65.

essence, within the family structure, children were taught to obey rather than to think for themselves. Ammar concludes his work by summing up that Egyptian child-rearing worked "to produce submissive, obedient children who lack the spirit of enterprise and initiative. Adults continuously wean their offspring from flights of imagination and spontaneity of action til they almost completely achieve their end by the time their offspring reach adolescence."<sup>9</sup> Raymond Cohen concurs with Ammar's findings that "the personal initiative and autonomy characteristic of child-rearing and education in the Western world, is neglected by Egyptian culture, as it is indeed throughout the Arab world."<sup>10</sup> Cohen goes on to say that, "denied freedom of choice, [Arab] children learn to do only what they are told. Self-reliance and personal initiative are not encouraged because they do not contribute to group needs."<sup>11</sup> Hisham Sharabi argues that, "Arab children [are] discouraged by their upbringing from exercising independent judgment. They are taught to accept unquestioningly the view of others."<sup>12</sup> Elsewhere, Sharabi has written of Arab child-rearing, "The child learns to form his self-image in accordance with the opinion of others around him; he is discouraged from developing personal standards that would allow him to become independent of the opinion of others."<sup>13</sup> Similarly, Barakat observes that Arab children, "avoid taking risks and trying new ways of doing things, for independence of mind, critical dissent, and adventure beyond the recognized limits are constantly and systematically discouraged by parents and other older members of the family."<sup>14</sup>

For the most part, Arab families and other primary groups taught their children to attach tremendous importance to blood ties and bonds of loyalty. Arab children were enjoined to stand in solidarity with their family and their close friends against all challengers. Moreover, they were taught that their identity came from their belonging to a particular primary group: their family, their group of friends, and perhaps their place of work. Arab families tended to teach that group affiliation was the most important thing in the world, and acceptance by the group was achieved by conforming to the accepted behavioral norms of the society. Thus teaching children to suppress their own judgment and needs to that of the larger group also contributed to a suppression of creativity and initiative among Arab children. According to Saad Eddin Ibrahim and Nicholas S. Hopkins:

[Arab] children learned not only to expect emotional and material support from an expanded kinship group, but also that any of them was nothing by himself outside that group. The child's personality was not only shaped by, but also submerged in the kinship group. His loyalty to it was therefore very intense. He hardly questioned or entertained independent judgment. He developed a reflexive deference to authority.<sup>15</sup>

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<sup>9</sup> Ammar, p. 231.

<sup>10</sup> Cohen, p. 22.

<sup>11</sup> Ibid.

<sup>12</sup> In Cohen, p. 22.

<sup>13</sup> Sharabi with Ani, p. 246.

<sup>14</sup> Barakat, *The Arab World*, p. 106. See also, Ammar, pp. 48, 132; Barakat, "Between the Always and the Never," p. 146; Barakat, *The Arab World*, pp. 201-205; Berger, p. 136; Cohen, p. 22; Hamady, pp. 28, 34; Ibrahim and Hopkins, pp. 83-84; Mounah Khouri, "Criticism and the Heritage: Adonis as Advocate of a New Arab Culture," in George N. Atiyeh and Ibrahim M. Oweiss, *Arab Civilization: Challenges and Responses*, (Albany, NY: SUNY Press, 1988), p. 188; Abdullah M. Lutfiyya, *Baytin: A Jordanian Village*, (The Hague: Mouton and Co., 1966), p. 49; Fatima Mernissi, *Islam and Democracy*, Translated by Mary Jo Lakeland, (Reading, MA: Addison Wesley, 1992), pp. 104-113; Van Nieuwenhuijze, p. 381; Sharabi, *Neopatriarchy*, p. 47; Afif I. Tannous, "Group Behavior in the Village Community of Lebanon," in Lutfiyya and Churchill eds., p. 100.

<sup>15</sup> Ibrahim and Hopkins, p. 83-84.

Arab children were taught to feel shame as an excruciating punishment, and to avoid it in any way possible. Indeed, there was no prohibition against distortion or fabrication to avoid shame, and Arab children generally were socialized to believe this was acceptable, even desirable, behavior to escape shame.<sup>16</sup> In Barakat's words, "In effect, the child is taught that the penalty for wrong-doing is public disgrace rather than a sense of personal remorse. He is conditioned, therefore, to escape humiliation as much as sin. Since shame results from being found out and ridiculed, it can be avoided as well by concealment as by rectitude."<sup>17</sup> According to Sharabi, parents taught their children that it was okay to do wrong, as long as no one saw it, thus "A double-standard of conduct is not only implicitly sanctioned, but encouraged in the pattern of [child-]rearing."<sup>18</sup>

Like all families, Arab families taught their children that certain occupations and skills were to be valued more highly than others. White-collar jobs as government officials, clerks, financiers, and other business managers were considered among the most prestigious careers by most Arab families, and children were encouraged to pursue them. Those who successfully attained such positions were treated with pride and respect by their relatives and friends. On the other hand, until very recently, jobs involving menial labor, working with your hands, and--by extension--technical skills, were not considered terribly prestigious. Indeed, true menial labor positions were looked down upon, and for most of this period, engineering and other technical work was often grouped in the same category. Thus Sania Hamady went so far as to say that "Arab society despises manual work: members of traditional families would prefer to starve than be shamed by engaging in a humble occupation."<sup>19</sup>

The primary method of teaching children in most Arab families was rote memorization enforced by arbitrary punishment. Halim Barakat and Hisham Sharabi concur that, "The typical urban, Muslim, middle- and lower-middle class family--i.e. feudal, bourgeois family--uses the principal techniques of shaming, physical punishment and rote-learning (*Talqin*) in socializing its children."<sup>20</sup> Elsewhere, Sharabi has written that, "the learning process in the Arab family (and beyond it) may be characterized by two aspects: it de-emphasizes persuasion (and reward), and it emphasizes physical punishment and rote-learning (*Talqin*)."<sup>21</sup> Both of these methods dampened analytical skills, degraded the ability of children to see beyond specifics, and discouraged

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<sup>16</sup> In particular, see Michael Gilson, "Lying, Honor, and Contradiction," in Donna Lee Bowen and Evelyn A. Early, *Everyday Life in the Muslim Middle East*, (Bloomington, IN: Indiana University, 1993), pp. 157-159.

<sup>17</sup> Barakat, *The Arab World*, p. 23.

<sup>18</sup> Sharabi with Ani, p. 249.

<sup>19</sup> Hamady, p. 38. Also on this point, see Barakat, *The Arab World*, p. 53; Berger, p. 405; Donna Lee Bowen and Evelyn A. Early, "Home, Community and Work: Introduction," in Bowen and Early eds., *Everyday Life in the Muslim Middle East*, p. 126; John Gulick, "Two Streams into One," in Lutfiyya and Churchill eds., p. 342; Hamady, p. 147; Derek Hopwood, *Syria, 1945-1986: Politics and Society*, (London: Unwin Hyman, 1988), p. 125; Joseph G. Jabbara, "Bureaucracy and Development in the Arab World," *Journal of Asian and African Studies*, Vol. XXIV, No. 1-2, 1989, p. 4; E. A. Kinch, "Labour Problems in the Early Days of the Industry," in Lutfiyya and Churchill eds., p. 358; P. A. Kluck, "The Society and its Environment," in Richard F. Nyrop, *Saudi Arabia: A Country Study*, Fourth Edition, (Washington, DC: Government Printing Office, 1984), p. 125; Pascal, et. al., pp. VIII, 27; David Pryce-Jones, *The Closed Circle: An Interpretation of the Arabs*, (NY: Harper Perennial, 1989), p. 268; Mohamed Rabie, "The Future of Education in the Arab World," in Michael C. Hudson ed., *The Arab Future: Critical Issues*, (Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1979), pp. 23-27.

<sup>20</sup> See Barakat, "Beyond the Always and the Never Was," p. 143.

<sup>21</sup> Hisham Sharabi in collaboration with Mukhtar Ani, "Impact of Class and Culture on Social Behavior: The Feudal-Bourgeois Family in Arab Society," in L. Carl Brown and Norman Itkowitz eds., *Psychological Dimensions of Near Eastern Studies*, (Princeton, NJ: The Darwin Press, 1977), p. 250.

independent thought and action. Children were forced to memorize information without necessarily being taught to use it as a basis for analogical reasoning, or as a beginning point for extrapolations to other situations. Information was considered useful only for the specific purpose and context for which it was taught. Similarly, since punishment was arbitrary and frequently no explanation was given for the action that prompted it--or what other action would have entailed a reward--children became wary of all independent action and instead were conditioned to take action only when specifically sanctioned by an authority figure.

This effect has been noted by numerous Middle East experts. For example, Ibrahim and Hopkins conclude that:

The internalization of traditional family values, norms, and rules of conduct relied on physical and psychological punishment. To behave properly meant to learn to suppress individual impulses. Since individuals had to take the clues of proper behavior from the traditional authority and heritage, and since they were not to choose or judge outside that framework, independent thinking and analytical abilities remained undeveloped, if not deliberately stunted. Instead, the socialization process over-emphasized rote-learning and memorizing.<sup>22</sup>

Hisham Sharabi likewise argues that, for Arab children, "Rote-learning and punishment had this in common: both excuse understanding and emphasize authority; they both cultivate passivity and inhibit change. The child was conditioned to accept without question the hegemony of the powerful and the learned."<sup>23</sup> Sharabi also writes that, "The aim of *Talqin* (rote-memorization) is to transmit the institutionalized values of the society and to preserve its established habits of dealing with the world. The subject is confronted with finished models which he appropriates without criticism or understanding; and in the process he acquires a pattern of seeing and valuing which strengthens conformity and discourages creativity and innovation."<sup>24</sup> Sana al-Khayyat's study of village life in Iraq led her to conclude that the constant disciplining of Iraqi children without explanation, and their punishment for asking questions left them incapable of acting independently. In her words, "parents commonly give children commands rather than explaining. Thus children do not grow up to make their own decisions and develop as independent people."<sup>25</sup> Finally, Pierre Bourdieu observes that:

Within his family the child also learns the rules of politeness and, to be more exact, the words he must say in each circumstances. The code of politeness supplies ready-made formulas for all the situations of existence, a genuine devotion to the cliché. A conversation can be carried on almost indefinitely without anything being left to improvisation. In short, the cultural apprenticeship tends to produce true psychological sets or prepared attitudes, the purpose of which is apparently to guard against, or even forbid, any improvisation, or at least to impose an impersonal form on thought or personal feeling.<sup>26</sup>

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<sup>22</sup> Ibrahim and Hopkins, eds., p. 84.

<sup>23</sup> Sharabi with Ani, p. 251.

<sup>24</sup> Ibid., p. 251.

<sup>25</sup> Sana Al-Khayyat, *Honor and Shame: Women in Modern Iraq*, (London: Saqi Books, 1990), p. 53. See also, Barakat, *The Arab World*, pp. 105-106.

<sup>26</sup> Quoted in Gerald D. Miller, "Classroom 19: A Study in Behavior in a Classroom of a Moroccan Primary School," in Brown and Itkowitz, p. 151.

## Education in Arab Schools

Evidence from Arab schools from primary to university levels also strongly confirms the predictions of the Arab-culture theory. The process of formal education in the vast majority of schools in the Arab world during this period relied on a method that instilled these same cultural values into Arab pupils, reinforcing the lessons taught by the family. Arab schools relied almost entirely on passive learning techniques, specifically rote memorization. It was most often the case that little or no effort was made to engage the student, nurture his or her intellectual curiosity, or encourage active participation in the educational process. Questions were discouraged in the classroom and information was to be accepted without explanation. Independent, creative thought and personal initiative were largely discouraged and subjects were taught as discrete bodies that did not allow for comparison or "cross-pollination." Science, mathematics and other technical subjects were taught in precisely the same fashion. Moreover, science and mathematics were extremely unpopular among both teachers and students because they were seen as carrying little prestige. As a result, efforts to increase the numbers of students studying technical subjects never came close to achieving their goals. Finally, as predicted by the theory, efforts to change this method of education progressed slowly, haltingly, and were strongly resisted throughout the period.

The educational system of all the Arab states in the postwar period derives ultimately from the Quranic schools--the *Kuttab* and the *Madrasah*--that were essentially the only formal education in the Arab states for many centuries until the nineteenth, or even the twentieth, centuries.<sup>27</sup> As the educational psychologist Gerald Miller described in his study of Moroccan schooling in the early 1970s, the primary purpose of the Quranic school was to pass on to the child the culture in the form of values, priorities, and proper ways of behavior. Actually learning any of the Quran was a secondary consideration. Miller notes that many Arab parents told the teacher, "Teach my son politeness and manners. As for the rest [i.e., the Quran] God will provide it."<sup>28</sup>

Throughout the postwar period, the educational method of Arab schools remained remarkably constant. Beginning in the 1950s and 1960s most of the Arab states instituted mass public education as part of a general economic development program. In many countries, primary schooling became mandatory for all children, and elsewhere, strong incentives were established to encourage attendance. Nevertheless, when the public schools took over the task of education from the Quranic schools they changed the curricula being studied but not the manner in which subjects were taught. The teaching method remained identical to that of the Quranic schools. Since the 1980s, there has been some movement toward reforming the educational method in some parts of the Arab world, Iraq being a particularly noteworthy example.<sup>29</sup> However, such efforts have been modest, they are confined to a minority of the population, and it remains to be seen whether the changes will last.

### **Passive Learning**

Most Arabs who grew up between the First World War and the Persian Gulf War were taught throughout their schooling to absorb knowledge, rather than to discover it.<sup>30</sup>

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<sup>27</sup> Bassam Tibi, *Islam and the Cultural Accommodation of Social Change*, Translated by Clare Krojzl, (Boulder: Westview, 1991), p. 103.

<sup>28</sup> Gerald D. Miller, "Classroom 19: A Study in Behavior in a Classroom of a Moroccan Primary School," in L. Carl Brown and Norman Itkowitz eds., *Psychological Dimensions of Near Eastern Studies*, (Princeton, NJ: The Darwin Press, 1977), p. 144.

<sup>29</sup> Miller, pp. 142-153; Pascal, et. al., p. 25.

<sup>30</sup> It is important to consider education during the period between the two world wars because the Arab soldiers who fought in the 1948 and 1956 wars were educated largely, if not entirely, before 1945. Similarly, the period after about 1980-1985 is less important for this study because even the Arab soldiers

Indeed, the central notion behind the teaching method was that knowledge is revealed, not created.<sup>31</sup> As Jacques Berque stresses, Arab education was "authoritarian and narrow."<sup>32</sup> Teaching was conducted in Arab schools in mostly authoritarian fashion, and students were generally discouraged from asking questions or actively participating in the process of education. Little effort was made to engage the student in understanding concepts and principles underlying the material: all that was considered important was the ability to memorize details verbatim.<sup>33</sup>

The traditional method of education in the Arab world was for the students to remain entirely passive and to simply absorb what the teacher presented to them. The course of study was expected to come entirely from the lesson plan of the teacher (itself dictated by the central authority of the education ministry) and students were discouraged from showing initiative or creativity in pursuing their education. All information came from textbooks picked out by the central authority, thus the teacher too was wholly dependent on the textbooks and did not dare to improvise or add to the prescribed lessons. For example, Gerald Miller relates that one Moroccan primary school teacher taught his students that  $3 \times 4 = 11$  because there was an obvious misprint in his official lesson plan. The teacher admitted to Miller that previously he had taught  $3 \times 4 = 12$ , but now that the lesson plan was different, he assumed that "Now this has been changed."<sup>34</sup>

Arab educational institutions at all levels relied heavily on traditional methods of rote memorization as the primary means of learning. In the classrooms of Arab schools, the teacher presented the information to be learned without explanation and the students were taught to simply memorize this information and be able to parrot it back on demand. The incentive structure of Arab schools encouraged the student to memorize lessons without internalizing them and left them little room to explore their imaginations or sharpen their analytic faculties. In particular, all of the Arab states made advancement from one level to the next contingent upon annual standardized tests which measured only the ability of the students to memorize their standardized textbooks.<sup>35</sup> Hammed Ammar remarks that, "the resort to rote learning has been the bane of education in modern schools. Criticisms of students' parrot-like work are abundant in many of the official government reports."<sup>36</sup> Bassam Tibi states simply that, "All Arab Islamic . . . universities I know of have courses of study based solely on the capacity for rote learning in order to pass successfully."<sup>37</sup> Mohamed Rabie describes the typical method of teaching in Arab schools in the following manner:

Students are given thousands of facts to memorize instead of the research skills that will enable them to find the facts when needed. Teachers and professors tend to cling to specific innovations instead of applying the principles of innovation, thus rendering the system rigid and conservative.

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who fought at the end of the Iran-Iraq War or in the Gulf War would likely have finished their schooling before this point.

<sup>31</sup> Pervez Hoodbhoy, *Islam and Science*, (London: Zed Books, 1991), 38-39.

<sup>32</sup> Berque, p. 30.

<sup>33</sup> Dale F. Eickelman, *The Middle East: An Anthropological Approach*, (Englewood Cliffs, NJ: Prentice Hall, 1981), pp. 238-240; Hoodbhoy, pp. 55-65, 123-124.

<sup>34</sup> Miller, p. 142.

<sup>35</sup> Berger, p. 119; Hamady, p. 211; Hoodbhoy, p. 39; David Lamb, *The Arabs*, Paperback edition, (NY: Vintage Books, 1988), pp. 4; Mernissi, p. 78; Pascal, et. al., pp. 23, 25, 34; Fahim I Qubain, *Education and Science in the Arab World*, (Baltimore, Md: Johns Hopkins University Press, 1966), p. 10; Sharabi with Ani, "Impact of Class and Culture on Social Behavior," p. 251; Sharabi, *Neopatriarchy*, pp. 87-96; Joseph Szyliowicz, *Education and Modernization in the Middle East*, (Ithaca, NY: Cornell University Press, 1973), pp. 183, 195-197, 274, 289, 306; Tibi, pp. 110-112; Viorst, p. 358.

<sup>36</sup> Ammar, p. 204, fn. 2.

<sup>37</sup> Tibi, p. 111.



Memorization, together with the authoritarian method of instruction, serves to inhibit rather than encourage students' ability to think and take the initiative. Material memorized will be regurgitated on paper during examinations. A hypothesis may go long untested and be accepted as fact. The students' ability to develop realistic and imaginative solutions to whatever problems they may have to deal with is very much limited.<sup>38</sup>

Likewise, Hisham Sharabi argues that:

Normally, the child's first encounter with the classical or literary language is through the sacred text, which children are often made to learn by heart. From the very beginning the child thus experiences a dissociation between *learning* and *understanding*. One's early spontaneous attempts at questioning and clarification (i.e., meaning, understanding) are aborted, and rote learning based on memorization and the rejection of all questioning, becomes the normal way of acquiring ideas and internalizing values.<sup>39</sup>

Arab students in the vast majority of schools generally were discouraged from asking questions, delving deeper into areas of interest, or otherwise actively participating in the educational process.<sup>40</sup> According to Pervez Hoodbhoy, Arab schools generally showed no interest in their proposed curricula for exciting the curiosity of children, developing an attitude of questioning, or conveying the notion that authority figures can be wrong.<sup>41</sup> Sana al-Khayyat found that, "Children are taught not to argue with their teachers but to show them an exaggerated degree of respect."<sup>42</sup> Gerald Miller's study of a Moroccan primary school revealed that the children were required to do everything in a rigidly prescribed manner. If the child failed to adhere to every last detail of that manner her work was considered wrong--with no explanation given--even if the work itself was substantively correct. In general, he found that the children were strongly encouraged to conform to models of prescribed behavior and were harshly punished for failing to do so.<sup>43</sup> Mohamed Rabie observed that, "from my experience, the questions that teachers ask are of a testing nature rather than an instructive one. Instead of leading students to alternative answers, only one answer is expected and accepted as being correct."<sup>44</sup> The research conducted by the 1979 RAND report on societal influences on Arab militaries found that Arab students and teachers frequently avoided asking questions altogether: the students to try to avoid showing ignorance, and the teachers to avoid humiliating the students by exposing their ignorance. They noted that American instructors in the Middle East had to go to great lengths to design special programs to allow real give-and-take

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<sup>38</sup> Mohamed Rabie, "The Future of Education in the Arab World," p. 25. Rabie claims this description applies to a universal stage of educational development. However, he makes it clear that he is really describing the Arab educational system and he makes no effort to demonstrate that this description applies to any other system. Indeed, his work focuses completely on the Arab world, makes no comparison with other societies, and his analysis and conclusions are narrowly focused on the Arab educational experience.

<sup>39</sup> Sharabi, *Neopatriarchy*, p. 85.

<sup>40</sup> Roderic D. Matthews and Matta Akrawi, *Education in Arab Countries of the Near East*, (Washington, DC: American Council on Education, 1949), pp. 157, 169-170; Miller, pp. 142-150; Pascal, et. al., p. 23; Sharabi, *Neopatriarchy*, p. 85; Tibi, p. 103.

<sup>41</sup> Hoodbhoy, p. 55.

<sup>42</sup> Al-Khayyat, p. 54.

<sup>43</sup> Miller, p. 146.

<sup>44</sup> Rabie, p. 24.

between the students and teachers.<sup>45</sup>

The education system of the Arabs also promoted the treatment of subjects as discrete and unrelated entities, and discouraged generalization or interdisciplinary comparisons. Because facts were simply memorized and were not synthesized into larger frameworks, Arab education generally did not teach students how to see trends or connections between facts. Developing an understanding of the underlying and essential characteristics shared by events or ideas, as well as broad theoretical generalizations, were not considered part of an Arab child's education.<sup>46</sup> According to the noted educational expert Joseph Szyliowicz, Arab curricula universally stressed the theoretical rather than the practical, and there was no attempt to integrate the variety of courses offered.<sup>47</sup> Constantine Zurayk bemoaned the "limited and fragmented education" of Arab schools, which he concluded prevented the individual from developing a comprehensive perspective on a subject.<sup>48</sup> Pervez Hoodbhoy stresses that this teaching method prevented students from developing an ability to internalize even elementary concepts.<sup>49</sup> US educators agree that the education system in the Arab world generally left Arab students with underdeveloped "powers of analysis and generalization."<sup>50</sup> The 1979 RAND study noted that Arab students generally did very well in vocabulary tests, but in tests based on analogies they scored low.<sup>51</sup>

Schooling in the Arab world was closely directed by strict guidelines handed down by the education ministry which chose textbooks, set curricula, formulated guidelines for advancement, and set standards for teacher training.<sup>52</sup> In their seminal study of Arab educational systems, Roderic Matthews and Matta Akrawi concluded:

Education in the Arab states is almost completely centralized. Policies, curriculums [sic], textbooks, plans for expansion, examinations, and certificates are all handed down from the central offices in the capital of each country. Under the central office there are usually regional offices which take their orders from it and which exercise limited influence on the shaping of educational policies. Their job is to execute the orders of the central office and to see that those subordinate to them apply them properly. The local communities have little to say about courses of study, books, methods, the appointment of teachers. . . . Throughout the various states (except possibly Lebanon) there is a certain dependence on the central government which leaves almost everything in education to it.<sup>53</sup>

Similarly Miller found that, to revise the math curriculum of Moroccan public schools, the Ministry of Education sent out detailed lesson plans to the teachers with instructions to the teachers to carry them out exactly. If a lesson plan was delayed in reaching a teacher, the teacher normally would not improvise and instead would simply re-teach the previous week's lesson plan verbatim--without even changing the examples or problems

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<sup>45</sup> Pascal, et. al., p. 43.

<sup>46</sup> Hamady, p. 211; Hoodbhoy, pp. 33-43; Miller, p. 144; Pascal, et. al., p. 27; Viorst, p. 358.

<sup>47</sup> Szyliowicz, p. 273.

<sup>48</sup> In Hani A Faris, "Constantine Zurayk: Advocate of Rationalism in Modern Arab Thought," in George N. Atiyeh and Ibrahim M. Oweiss, *Arab Civilization: Challenges and Responses*, (Albany, NY: SUNY Press, 1988), p. 27.

<sup>49</sup> Hoodbhoy, p. 43.

<sup>50</sup> Pascal, et. al., p. 27.

<sup>51</sup> Pascal, et. al. p. 27.

<sup>52</sup> Matthews and Akrawi, pp. 170, 542-543; Szyliowicz, p. 197.

<sup>53</sup> Matthews and Akrawi, pp. 542-543.

used.<sup>54</sup> "Urban and rural, agricultural and tribal, all students receive the same texts to memorize, which come from the capital and sometimes from outside the country," in the words of Mohamed Rabie.<sup>55</sup> Fahim Qubain explains that, "In all the Arab countries, the elementary school curriculum and the textbooks are predetermined by the central ministry of education."<sup>56</sup> Szyliowicz observed that in every Arab state, the Ministry of Education, "Permitted no deviations of any sort from its detailed regulations, thus effectively stifling any possible initiative or flexibility within particular schools."<sup>57</sup> He also wrote that, "Apart from some variations of detail the common pattern is one of extreme centralization, the ministries of education exercising almost dictatorial control over all aspects of education."<sup>58</sup>

As a final note, Miller reports that American Peace Corps volunteers in Morocco observed that Moroccan students often had great difficulty adjusting to foreign educational systems that tried to promote independent, creative thought, intellectual curiosity and initiative, interdisciplinary comparisons, and learning by understanding rather than simple absorption:

The Moroccan *Lycée* student finds himself in a situation in which he must "think for himself." The young French and Americans who make up the majority of the faculty of secondary education [in the Lycée] often encourage innovation. The result is that the students are either incapable of making the necessary responses or they just go overboard, causing bedlam in the classroom. . . . The students are thrown into a situation where the traditional behaviors will no longer help them to cope.<sup>59</sup>

### **The Persistence of the Traditional Educational Method**

These methods remained the dominant, and often only, educational practices employed in all of the Arab states during 1945-1991. In 1949, Roderic Matthews and Matta Akrawi (the Director General of Higher Education in Iraq) surveyed education throughout the Arab Middle East. They found that in Iraqi schools, for example:

The children rarely take the initiative in the classroom, and they are not encouraged to inquire about things which interest them. Questions of a type to provoke original thought are rare. Thus, teaching in these schools

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<sup>54</sup> Miller, p. 152.

<sup>55</sup> Mohamed Rabie, "The Future of Education in the Arab World," in Michael Hudson ed., *The Arab Future*, p. 24.

<sup>56</sup> Qubain, p. 8.

<sup>57</sup> Szyliowicz, p. 186.

<sup>58</sup> Ibid., p. 300. Derek Hopwood has asserted that, in Syria, this overcentralization of the education system--as well as the ubiquitous efforts to discourage creativity and initiative among students--is a product of the dictatorial system of government. He claims that the regime purposely structures the national curriculum to make the Syrian people complacent and malleable. (Hopwood, *Syria*, pp. 116-122). This assertion is patently false. All of the Arab states have demonstrated these same educational methods regardless of the nature or objectives of the government. Indeed, some Arab governments that consciously hoped to promote initiative and innovation continued to rely on these same methods. Moreover, the Syrian educational system was equally centralized and employed exactly the same methods during the French mandate, the short-lived monarchy, and the nominally representative oligarchy that all preceded the first military coups. Even during the two decades of constant regime changes before Hafiz al-Asad came to power, a time when none of the dictators was in power long enough to effect real changes in the education system (and none probably had the time to worry about such matters) Syrian schools were just as centralized and employed exactly the same method. Thus there is no correlation between the type of regime and the educational method of the various Arab states. (See, Matthews and Akrawi, pp. 325-404.)

<sup>59</sup> Miller, p. 152.

is principally a matter of presenting facts and demanding that they be memorized, this in spite of the fact that the primary course of study eschews such practice.<sup>60</sup>

Methods of teaching in secondary schools do not differ in their essentials from those of the primary schools. In the main they are based on the initiative and activity of the teacher in class. Great stress is laid on the teacher's explanation in class by inductive, deductive, lecture, and demonstration methods according to the subject. Not enough emphasis is laid on student activity which should develop understanding and knowledge of what the students are studying. They, therefore, come to rely on the teacher for clarifying the subject. Theirs is to learn what has been explained and be ready to recite it back when required. In this way the "spoon-feeding" of the primary school is carried over to the secondary school, and the students do not as a rule acquire a habit of self-reliance and self-instruction.<sup>61</sup>

It is largely a textbook method of teaching. . . . The textbook is followed closely lesson by lesson and chapter by chapter, the students relying on it and on the teacher's explanation in preparing their lessons. Little, if any, reading is done outside the textbook, since most of the teachers do not assign reference work. It is the rare teacher who tries to stimulate students' interest in reading outside magazines and books, fiction or otherwise.<sup>62</sup>

Matthews and Akrawi found the same methods of education in every other Arab state they examined, including Egypt, Jordan, Syria, and Lebanon. In Syria, for example, they noted that, "Through the use of readers and textbooks and discussions in class, subject matter is methodically imparted to the children. The teacher is the prime mover, and few, if any, classroom activities are initiated by the children."<sup>63</sup> While in Lebanon, "Teaching consisted of imparting knowledge and skills to the pupils, the initiative being largely that of the teacher, pupils taking the passive, receptive role."<sup>64</sup>

The study by Matthews and Akrawi was probably the most systematic and their methods the most thorough of work done on Arab education in the interwar and immediate postwar periods. However, their findings were by no means unique. In her study of the growth of nationalism in Iraq before World War II, Reeva Simon described the curriculum adopted for Iraqi public schools in the 1920s by observing that, "It was a narrow academic course of study, mandatory for urban and rural study alike, which required memorization of facts from compulsory textbooks for success in the state-administered examinations and allowed the teacher no leeway for inspiration or local concerns."<sup>65</sup> Szyliowicz, has commented that in Egypt before the Second World War, "Students were expected to memorize a large body of facts, discipline remained important, and examinations continued to dominate the thoughts of students and teachers

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<sup>60</sup> Matthews and Akrawi, p. 157.

<sup>61</sup> Matthews and Akrawi, pp. 169-170.

<sup>62</sup> Matthews and Akrawi, p. 170.

<sup>63</sup> Matthews and Akrawi, p. 361.

<sup>64</sup> Matthews and Akrawi, p. 439.

<sup>65</sup> Reeva S. Simon, *Iraq Between the Two World Wars: The Creation and Implementation of a Nationalist Ideology*, (NY: Columbia University Press, 1986), p. 79.

alike. . . . Rigidity and formalism dominated the education system to such an extent that the schools of the 1930s were practically identical to those established by Mohammed Ali a century earlier."<sup>66</sup> In his study of modern Egyptian history and society, Derek Hopwood wrote that at the time of the 1952 revolution, even secular Egyptian schools relied on "traditional methods of rote learning."<sup>67</sup>

The educational methods described by Matthews and Akrawi in the immediate aftermath of World War II persisted throughout the period 1945-1991. Leonard Binder observed in 1965 that in Arab schools, "Educational practices emphasize the authority of the teacher, rote learning, formal curricula, uniformity, discipline and routine. . . . In these respects, the school resembles all non-family organizations and simply carries the general culture of social relations into the imported and adapted modern educational structure."<sup>68</sup> In 1966, one French education expert despaired that, "Even today one can apply the words of the Egyptian minister of Public Instruction (1935) concerning most graduates: 'Most of them lack the personality and the spirit of decision; they hesitate to think for themselves and do not dare to express their opinions.'"<sup>69</sup> In 1969, a UNESCO report on Arab education concluded that, "Most training schools and colleges seem to be conducted on the lecture method, on 'Listening, recording, and reproducing,' on, 'receiving instructions and obeying' and 'memorizing.'"<sup>70</sup> According to Fahim Qubain, the curricula of Arab schools were, "non-functional and divorced from the life and environment of the student. Moreover, teaching techniques tend to be authoritarian, dependent on learning by rote, and lacking in the development of curiosity and the thinking faculties of the child."<sup>71</sup>

In the early 1970s, Joseph Szyliowicz conducted a comprehensive study of the educational systems of the Arab Middle East at all levels as a means of probing Arab problems with economic development. Szyliowicz found that the same methods of education persisted that had been employed by Arab society for centuries and that these methods were producing men and women ill-suited for economic and cultural transformation. Szyliowicz work deserves to be quoted in some length.

The educational system during these years produced thousands of graduates who have been described by an Egyptian scholar who has analyzed the school system as lacking in initiative and adventure, social intelligence and vision, the ability to think independently, and an appreciation of knowledge and culture [i.e., the arts, literature]. He pointed out that all students sought to obtain an administrative position, regardless of its routine nature or low salary, that they were incapable of understanding or participating in the national life, let alone directing it, that they lacked the ability for creative, innovative thought, and that since they had forgotten the information with which they had been stuffed they were practically illiterate.<sup>72</sup>

Thus whether the child was an Egyptian, an Iraqi, or a Jordanian, he usually had to memorize a mass of data with limited applicability to his environment or to the national situation in order to pass the appropriate

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<sup>66</sup> Szyliowicz, p. 183.

<sup>67</sup> Derek Hopwood, *Egypt: Politics and Society, 1945-1990*, 3rd Edition, (London: Harper Collins Academic, 1991), p. 136.

<sup>68</sup> Binder, p. 413.

<sup>69</sup> Quoted in Szyliowicz, p. 272.

<sup>70</sup> Cited in Szyliowicz, p. 310.

<sup>71</sup> Qubain, p. 10.

<sup>72</sup> Szyliowicz, pp.195-196.

examinations. Seldom was the curriculum geared to local needs. Syllabi were decreed by the central ministry and did not permit any gradation or variation in the choice of courses.<sup>73</sup>

For most teachers, the only pedagogical technique is memorization, and at all levels, little attention is paid to stimulating students to think for themselves. The normal pattern is for the teacher to condense textual materials into notes that they either dictate or hand out for the student to further abridge and memorize them as thoroughly as possible in order to pass the final examination. Various efforts to mitigate the traditional emphasis upon memorization of facts so as to provide independent, flexible thinkers have been largely unsuccessful.<sup>74</sup>

On university-level education, Szyliowicz found that:

In Egypt, the emphasis remains upon formal lecture, and students are accorded little opportunity for discussion, questioning, or meeting with the professor. Moreover, the student is graded only upon his success in the annual examination, so that once again the aim of the student is not to learn creatively or to exercise his mental faculties in a disciplined manner but to prepare for examinations by cramming and memorizing the factual information contained in the lecture notes or the textbook.<sup>75</sup>

In the mid-1970s, Gerald Miller conducted a study of Arab educational methods by observing a class of 5th year students at a girl's primary school in Rabat, Morocco. Miller purposely chose a girl's school because women's education was a very recent development in the Arab world and Miller expected it would be the least burdened with traditional approaches, consequently, he warns that his study is probably biased in favor of education being more "progressive" than is the norm. Despite this bias, the school he observed was just as wedded to traditional Arab teaching methods as the rest of the Moroccan school system. Miller noted that there were almost no prolonged exchanges between the teacher and the student either initiated by the teacher to determine whether the students had internalized the lesson, or else by the students to try to elicit additional information from the teacher to better understand the material. There also were almost no exchanges among students and instead all communication was between student and teacher. Moreover, there were almost no exchanges between teacher and student instigated by the student for questions, comments or requests for additional clarification.<sup>76</sup> In the terms of his methodology, Miller concluded that:

The children's verbal responses were rote imitation 73 percent of the time, non-questioning 93 percent of the time, and non-generalized 90 percent of the time.\* Fifty-six percent of all guided behaviors were reflexive responses to commands. These findings would strongly suggest that there is little innovative behavior happening in this classroom. While the risk of

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<sup>73</sup> Szyliowicz, p. 197.

<sup>74</sup> Szyliowicz, p. 274.

<sup>75</sup> Szyliowicz, p. 289.

<sup>76</sup> Miller, p. 150.

\* For "non-questioning behavior" Miller observed the first time the class was given new, packaged information and observed whether the students asked questions beyond the initial packaging. Miller defines "generalized behavior" as "applying learned behaviors to new situations other than the ones they were learned in." See Miller, p. 147.

generalizing from the observations of one classroom are immense, the rigid uniformity of the system and its tightly centralized control would suggest that these findings could be applicable throughout the entire school system of Morocco.<sup>77</sup>

Change-oriented behaviors diverge considerably from those found in traditional Moroccan society, where the notions of spontaneity, improvisation, or questioning the role of traditional authority are considered taboo. . . . Teachers and scholars are considered in possession of knowledge that cannot be questioned or open to analysis. Many observers have noted how the Quranic school, for example, discourages intellectual curiosity at an early age. The major activity in the Quranic school is rote recitation of phrases following a strictly prescribed form. Besides discipline and submission to authority, little is learned that can be generalized to the child's experience in the outer world.<sup>78</sup>

The entire education program in Morocco, from the teacher training institute to the small country primary school, leaves one with the feeling that what is taught in the classroom has little applicability to the outside world. . . . Although the academic program may have limited relevance to the child's daily experience, discipline and the attitudes about authority and innovative thought do have significant personal importance in terms of cultural apprenticeship. Because the role expectations communicated in the classroom are compatible with those prescribed by other social institutions, the Moroccan child has little difficulty reconciling his school experience with other facets of his daily life. Although there has been a recent modernization of the primary school curriculum, a closer analysis suggests that the lasting lessons learned have changed little from those taught for centuries in the traditional Quranic schools.<sup>79</sup>

More recent analyses of education in the Arab world have found largely the same patterns. The 1979 RAND study of societal influences on Arab militaries also found that education remained very traditional throughout the Arab world, stressing subjects like religion, Arab history, and Quranic law. The study noted that everywhere, "Authoritarian teachers use drill, memorization, and strict obedience to convey a fixed curriculum."<sup>80</sup> Derek Hopwood commented on teaching in Syrian schools in the 1980s that:

There is no interest in or conception of change. Such a system is authoritarian where the teacher's authority is unquestioned and emphasis is laid on the reproduction of memorized facts. This method stunts initiative and the attitudes instilled at school are carried over into working life, the desire not to disturb the system and a reluctance to assume authority.<sup>81</sup>

Similarly, to illustrate the methods of Egyptian schools in the 1980s, Hopwood tells the story of a primary-school class in Cairo that boasted that they could "read" their primers without even looking at the pages.<sup>82</sup> In 1991, Pervez Hoodbhoy wrote that Arab Islamic

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<sup>77</sup> Miller, p. 149.

<sup>78</sup> Miller, p. 144.

<sup>79</sup> Miller, pp. 152-153..

<sup>80</sup> Pascal, et. al., p. 23.

<sup>81</sup> Derek Hopwood, *Syria, 1945-1986: Politics and Society*, (London: Unwin Hyman, 1988), p. 116.

<sup>82</sup> Hopwood, *Egypt*, pp. 138-139.

schools showed no interest in structuring their curricula to excite their students or to develop an attitude of questioning. In particular, they worked hard to discourage the notion that authority might be wrong. Knowledge of all kinds was viewed as unchangeable and all books tended to be memorized.<sup>83</sup> In 1991, Bassam Tibi still despaired that:

In Muslim societies, where higher institutions of learning have a deeply-rooted procedure of rote learning, the content of positive sciences adopted from Europe is treated in a similar fashion. Verses of the Quran are learned by heart because they are infallible and not to be inquired into. Immanuel Kant's *Critiques* or David Hume's *Inquiry*, now available in Arabic translation, are learned by heart in a similar manner and not conceived of in terms of their nature as problem-oriented inquiry.<sup>84</sup>

As late as 1992, Fatima Mernissi bemoaned the fact that the vast majority of Arab children are taught in the traditional manner. In her words, "Today of course, the institution has been modernized, the [teacher] has a blackboard and a class list for calling the roll: new materials have been introduced. Nevertheless the method of teaching remains the same."<sup>85</sup> Finally, in his 1994 survey of Arab politics, Milton Viorst relates that:

An Arab professor at a West Bank university, a Muslim who taught for many years in the US, told me that his Palestinian students, though more highly motivated and more conscientious than American students, were far more timid about exploring the bounds of knowledge. "They cannot free themselves from the habit of learning by rote," he said. "They are more sensitive to community opinion. They are more dependent on the teacher. Most striking to me, their training in the Koran teaches them that all knowledge is in the book. One can memorize the book; one can even interpret it. But a book is not a point of departure; one cannot add to it. The Islamic tradition holds that learning is fixed. My students resist going beyond the book, any book."<sup>86</sup>

### Technical Education

Science, mathematics, and other technical subjects consistently suffered in Arab educational systems throughout the period 1945-1991. Arab schools applied the same teaching methods to these subjects as they employed for all teaching, badly hindering their students from developing an accurate understanding of scientific knowledge or the scientific method. Science was taught by rote memorization, with little emphasis on internalizing the material so that it could serve as the basis for independent inquiry. For the most part, the teachers performed all "experiments" as demonstrations without giving their students the opportunity to conduct them and learn for themselves. Little effort was made to convey to students the more general principles behind experiments or the general applicability of scientific principles and methods.<sup>87</sup> In Arab schools, "A student . . . learns natural science or technology exactly as if it were sacral knowledge from the

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<sup>83</sup> Hoodbhoy, pp. 39, 55.

<sup>84</sup> Tibi, p. 110.

<sup>85</sup> Fatima Mernissi, *Islam and Democracy*, Translated by Mary Jo Lakeland, (Reading, MA: Addison Wesley, 1992), p. 79.

<sup>86</sup> Milton Viorst, *Sandcastles: The Arabs in Search of the Modern World*, (NY: Alfred A. Knopf, 1994), p. 358.

<sup>87</sup> Hoodbhoy, pp. 33-48, 124; Matthews and Akrawi, p. 170; Qubain, p. 134; Szyliowicz, pp. 39, 290.



Koran and Hadith," according to Bassam Tibi.<sup>88</sup> Pervez Hoodbhoy notes that Ptolemaic astronomy and a geocentric cosmology is still taught in many Arab Islamic universities, particularly in Saudi Arabia and other puritanical countries.<sup>89</sup> Derek Hopwood has observed that even at modern Syrian universities there is an "Overemphasis on the reproduction of knowledge and examination-passing. Students complain that on graduation they are not good engineers or computer programmers, but that they have learned how to pass examinations."<sup>90</sup> Fahim Qubain illustrated problems in Arab teaching of science by summarizing the practices employed in Iraq:

As in most Arab countries, the methods of instruction leave something to be desired. The instructor usually delivers a lecture to a large number of students. Class discussion and quiz sections are the exception rather than the rule. The student relies heavily on passive memorization of textbooks and lecture notes. A considerable part of the laboratory work consists of demonstration rather than actual student experience.<sup>91</sup>

Szyliowicz observed that in some of the poorer schools of the poorer Arab countries the availability of scientific equipment prevented the students from taking part in laboratory experiments. However, Szyliowicz (and Qubain as well) both found that this was not the whole story:

Even when such equipment is available, the tendency is for the teacher to monopolize the laboratory. Instead of allowing students to engage in practical work, the teacher demonstrates the experiment to them. . . . The emphasis remains upon lectures, memorization, and rote learning, and little or no attempt to discuss or understand the material is ever made. The goal continues to be to pass the examination by memorizing the text--and few students look at any book except that one.<sup>92</sup>

Indeed, Qubain notes that these same problems were evidenced throughout the Iraqi school system despite the fact that Baghdad's oil wealth meant that there was no shortage of modern laboratory equipment in most urban high schools and universities.<sup>93</sup>

Qubain also commented that science teachers in the Arab world generally lacked the creativity or initiative to use whatever was available to them to demonstrate scientific principles. They insisted on having the most up-to-date equipment or they would do nothing at all.<sup>94</sup> Overall, Qubain's study of science education in the Arab world led him to the following conclusions:

Unfortunately, science instruction in most Arab countries is generally of poor quality. It consists mainly of classroom learning and memorization of equations and formulas. Little use is made of the local environment to explain natural phenomena and little attempt to make dry formulas become living, comprehensible reality. Experiments using simple gadgets that can be easily constructed by the teacher, or even by the pupils

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<sup>88</sup> Tibi, p. 114.

<sup>89</sup> Hoodbhoy, p. 48.

<sup>90</sup> Hopwood, *Syria*, p. 127.

<sup>91</sup> Qubain, p. 239. Also see his description of the teaching of science in Syria, pp. 447-448.

<sup>92</sup> Szyliowicz, p. 312. Also see Qubain, p. 19.

<sup>93</sup> Qubain, p. 239.

<sup>94</sup> Qubain, p. 19.

themselves under the teacher's supervision, are rarely employed.<sup>95</sup>

The methods of instruction tend heavily toward classroom lectures, booklearning by rote, and memorization of facts, equations, and formulas. Recitation usually consists of repeating without questioning what the book or instructor has stated. There is very little or no outside reading, and many students go through high school without having read a single book on science aside from the assigned textbooks.<sup>96</sup>

Consequently, in the words of Hisham Sharabi, "The institutions of higher learning which mushroomed throughout the Arab world in the post-independence period produced scientists but not science, medical doctors but not medical science, social scientists but not social science, and so forth."<sup>97</sup>

The prejudices of Arab society against science and technical work contributed to a denigration of scientific education generally and to tremendous problems in recruiting students for engineering, basic science, and other technical disciplines.<sup>98</sup> The 1969 UNESCO conference on education in the Arab world concluded that Arab schools tended to allot less time to math, science, and practical activities than any other region, and the gap was growing worse.<sup>99</sup> Even in the 1990s, Peter Wilson and Douglas Graham found that in Saudi Arabian schools, "Long hours are devoted to Koranic memorization, while relatively little time is spent on science or mathematics."<sup>100</sup> Similarly, Hopwood notes that despite the Syrian government's emphasis on producing larger numbers of scientists, engineers, and technicians, this had little impact on the teaching of science and mathematics in Syrian schools:

In intermediate schools, math and science subjects took only 23 percent of the curriculum and technical subjects a mere six percent. Technical education was separate from general education and was regarded as second best. Only those who could not continue general education entered technical schools. The number of technical students was some 8-12 percent of the total secondary body. . . . Higher education showed a similar bias and was not geared to the needs of the country. The majority of students read [Brit: studied] arts and humanities, and Islamic law, although employment opportunities in these fields were scarce. Posts in technical fields remain unfilled. . . . Only 3-4 percent studied medicine and slightly more science and engineering.<sup>101</sup>

Similarly, Szyliowicz summarized the status of technical and vocational schools in the Arab world in 1940s as, "By and large, only students who could not qualify for admission into academic institutions were enrolled; they were considered low-prestige schools and were unappealing to most students owing to their weaknesses as well as to cultural factors within the society."<sup>102</sup>

As a result of these stigmas, the brightest teachers and students tended to pursue

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<sup>95</sup> Qubain, pp. 9-10.

<sup>96</sup> Qubain, p. 19.

<sup>97</sup> Sharabi, *Neopatriarchy*, p. 81.

<sup>98</sup> Matthews and Akrawi, p. 549; Szyliowicz, p. 313..

<sup>99</sup> Szyliowicz, pp. 307-308.

<sup>100</sup> Peter W. Wilson, and Douglas F. Graham, *Saudi Arabia: The Coming Storm*, (Armonk, NY: M.E. Sharpe, 1994), p.257.

<sup>101</sup> Hopwood, *Syria*, p. 122.

<sup>102</sup> Szyliowicz, p. 195.

the humanities, and frequently only the poorest teachers and students were relegated to science, medicine, engineering and other technical fields. Throughout the Arab world, teachers in technical and vocational subjects were not considered as prestigious as those in the humanities or even the social sciences.<sup>103</sup> Matthews and Akrawi concluded that the best students, those who had their choice of careers, gravitated for the most part toward government and white-collar jobs. Indeed, they found that even drop-outs frequently considered themselves "too well-educated to work with their hands."<sup>104</sup> Szyliowicz found the same, remarking that:

University education still means, for thousands of students, a focus upon law, the humanities, and the social sciences, and most states already confront serious shortages of high-level manpower that are expected to become even more acute. . . . Accompanying this shortage is an oversupply of graduates in non-technical fields whose absorption represents a serious problem everywhere.<sup>105</sup>

In fact those who did graduate with any sort of technical degree often did not want to practice their skill. Most tried to join the government bureaucracy, and failing that they would try to return to the university for a more respectable humanities degree. As a last resort, they would turn to teaching--preferably in a non-technical subject, but science or math only if there were no other alternative. Actually practicing a technical skill was rarely a student's first priority.<sup>106</sup> An official Egyptian government report in the late 1960s stated boldly:

The United Arab Republic [Egypt] is rapidly becoming an industrial country. . . this led [sic] to a great demand of specialized personnel. . . . The government finds great difficulty in preparing these numbers, on the other hand a big surplus of unemployed graduates of theoretical faculties are with no work at all. Another notable phenomenon is that the occupations that we called the "white collar" are always preferred to the "blue-collar type." . . . All the second type are better paid and enjoy much better chance of promotion, yet it has always been noticed that secondary school graduates who fail to join higher education prefer the white-collar job.<sup>107</sup>

These practices and the pervasive anti-scientific atmosphere in the Arab states, prompted many technically-skilled Arabs to leave their home countries and move to the West. In her study of the Egyptian "brain drain," Saneya Abdel Wahab Saleh concluded that the major reason for this phenomenon was the lack of moral and social recognition for scientists in Egypt.<sup>108</sup> They were stifled by the intellectual atmosphere in both the academic and private arenas of Egyptian society and were looked down upon as performing necessary but unattractive services. As she put it, "They did not feel wanted here."<sup>109</sup> Focusing on medical doctors and engineers who emigrated to the West, Saleh found that many left for, "opportunities to be creative, a chance to use professional

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<sup>103</sup> Szyliowicz, p. 276.

<sup>104</sup> Matthews and Akrawi, p. 549.

<sup>105</sup> Szyliowicz, p. 39. See also, pp. 286, 294-296, 313.

<sup>106</sup> See for example, Szyliowicz, p. 315.

<sup>107</sup> Szyliowicz, pp. 269-270.

<sup>108</sup> Saneya Abdel Wahab Saleh, "The Brain Drain in Egypt," *Cairo Papers in Social Science*, Vol. 2, Monograph 5, May 1979, p. 33.

<sup>109</sup> Saleh, p. 35.

training effectively, to work in their specialization by carrying out research in a scientific atmosphere. What really frustrated and pushed them to emigrate can be stated thus: feelings of uselessness in their home or native community, of time and energy lost, of lack of recognition and esteem, of loss of self-respect and sense of identity. . ."<sup>110</sup>

### Resistance to Change

As predicted by the Arab-culture theory, efforts to reform these educational practices met with little success. On numerous occasions after World War II, Arab states tried to promote the encouragement of independent thought, initiative, and creativity among students in Arab schools, but rarely succeeded in effecting any lasting change. Invariably, the most important proposed changes were not properly understood by those expected to put them into practice, while some minor changes that were effected usually faded rather quickly. For example, Miller found that even after Rabat's massive effort to "Westernize" education in its schools, Moroccan teachers relied on the same practices they had always used although they believed that they were employing the modern, progressive Western educational method.<sup>111</sup> By and large, the Herculean labors of Arab governments to educate their populations resulted in a dramatic expansion in the *quantity* of education provided, but little or no change in the *quality* of education provided. Far more Arab children were exposed to at least some formal education after the major reform movements of the 1950s and 1960s, but the education they received was derived from traditional Arab methods.<sup>112</sup>

Many of the Arab states attempted to import Western educational models to reform their school systems but to little avail. For instance, in 1932, Iraq invited in a team of American educational experts to design a reform program to modernize Iraqi schools. Despite the real interest of the government in modernizing the educational system, Baghdad was never able to carry out the proposed reforms.<sup>113</sup> In the words of Mohamed Rabie, "The expansion of education in the last two decades [the 1950s and 1960s] succeeded in providing education for more people, but there was no significant change in the objective of education."<sup>114</sup> Dale Eickelman, notes simply that "Major changes in educational systems take a long time to have a widespread impact. Popular respect for the concept of Islamic knowledge as fixed and memorizable and the cognitive style represented by such education remains largely intact."<sup>115</sup> Constantine Zurayk warned that while there has been enormous progress in access to education, "This growth has not been accompanied by a corresponding enhancement of quality. Indeed, many who are concerned in this development, whether as participants or as observers, note a deterioration in quality and warn of its dangerous consequences. In education, numbers are placed above standards, and in literary output vulgarization outruns by far original creation."<sup>116</sup> Hopwood observes that Nasser's effort to "reform" Egyptian education still ended up promoting the same rigid conformism and in 1964 an Egyptian educational expert still concluded that "education was still confused with the ability to absorb and memorize facts in order to regurgitate them for examination."<sup>117</sup>

The inability to effect real reforms in Arab teaching methods were felt most

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<sup>110</sup> Saleh, pp. 96-99.

<sup>111</sup> Miller, p. 150.

<sup>112</sup> Berger, p. 119; Matthews and Akrawi, p. 539; Szyliowicz, pp. 116, 182-183, 187, 274, 301, 306.

<sup>113</sup> Simon, pp. 90-95.

<sup>114</sup> Rabie, p. 23.

<sup>115</sup> Eickelman, p.246.

<sup>116</sup> Constantine K. Zurayk, "Cultural Change and Transformation of Arab Society," in Michael C. Hudson ed., *The Arab Future: Critical Issues*, (Washington, DC: Center for Contemporary Arab Studies, Georgetown University, 1979), p. 12. See also p. 23.

<sup>117</sup> Hopwood, *Egypt*, pp. 137, 140.

strongly in the sciences and technical fields. Starting in 1953, the Egyptians made major changes in Egyptian primary and secondary school curricula designed to produce ever greater numbers of technically-skilled personnel. Indeed, in 1960 Cairo hoped to have three students studying the sciences for every one in the humanities. However, both Qubain and Szyliowicz note that far from alleviating this problem, the gap between Egypt's need for technically-trained personnel and its actual production of such people actually widened by the early 1970s.<sup>118</sup> Szyliowicz also points out that although the percentage of pupils in general secondary education in the Arab world rose from 81 percent to 86 percent in 1960-1968, the percentage of students enrolled in technical and vocational schools at this level actually dropped from 15.2 percent to 11.1 percent.<sup>119</sup> Consequently, even into the 1990s, the number of Arab students studying science, medicine, engineering and other technical fields was low relative to other regions, as was the number of schools and programs offering such studies, and ultimately, so was the number of scientists and other technically-trained personnel in the Arab world.<sup>120</sup>

### **Military Training**

As predicted by the Arab-culture theory, Arab military training procedures reflect the same educational method as Arab schools and families. Unfortunately, little is available in the unclassified literature regarding Arab military training practices. However, the information that is available uniformly indicates that the method of training soldiers and officers in Arab militaries is identical to the methods of the Arab educational system. These observations have been strongly confirmed in interviews with US military personnel who have trained with the Egyptian, Jordanian, and Saudi armed forces and by analysis of a sample of Iraqi training manuals recovered by US military forces during the Persian Gulf War. Essentially, the Arab militaries simply adopted the educational practices of the larger society as the method by which they trained their forces. This being the case, it would be surprising if the educational method that produced certain patterns of behavior in the overall society did *not*, when adopted for military training, produce the same patterns of behavior in the armed forces.

#### **A Rigid Training Method**

Just as Arab schools taught academic disciplines by rote memorization so too did Arab armed forces teach military skills by rote memorization. Most training in the Arab states was taught by the enforced memorization of basic skills. Arab soldiers and officers were generally made to repeat the same set of actions over and over again without any variation. Little or no effort was made to have the personnel understand the purpose of the skill or how it might be adapted to suit different circumstances. Indeed, it was the norm among Arab armies that memorizing the steps needed to perform the task was emphasized to the exclusion of actually attaining the goal the task was intended for.<sup>121</sup>

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<sup>118</sup> Qubain, pp. 30-31; Szyliowicz, pp. 269-271.

<sup>119</sup> Szyliowicz, pp. 38-39.

<sup>120</sup> Hoodbhoy, pp. 124-126; Hopwood, *Egypt*, p. 141; Hopwood, *Syria*, p. 125; Joseph G. Jabbara, "Bureaucracy and Development in the Arab World," *Journal of Asian and African Studies*, Vol. XXIV, No. 1-2, 1989, p. 4; Matthews and Akrawi, pp. 175, 318; 552; Pascal, et. al., 23-25; Rabie, p. 23.; Szyliowicz, pp. 198, 313. Of course, beginning in the 1980s, another wave of educational reforms began in the Middle East and there is reason to believe that this is the beginning of a slow process that eventually may lead to real change.

<sup>121</sup> Hassan El Badri, Taha el Maghdoub, and Mohammed Dia el Din Zohdy, *The Ramadan War, 1973*, (NY: Hippocrene, 1974), pp. 17-90; Cordesman, *After the Storm*, p. 268; Roy K. Flint, Peter W.

The superb Egyptian and Iraqi combined arms operations in 1973 and 1988 followed by their complete inability to perform these very same operations whenever the course of battle diverged from their set-piece plans attests to this pattern of learning specific operations by rote rather than internalizing the general principles so that they could be applied and adapted to any situation.

Another, more specific, example of this can be found in Egyptian tank-crew training. Before the 1973 October War the Egyptians adopted Soviet tank tactics. At that time, the Soviet doctrine was to have the commander of a tank platoon designate a single target, at which the entire platoon (three tanks including the commander's) would then fire until it was destroyed, at which point the commander would designate a new target. The Soviets calculated that, given the gunnery skills of their crews, it normally would take three salvos from the platoon (nine shots) to kill an enemy tank. Rather than seeing this as a general guide for action, the Egyptians turned it into a hard-and-fast rule and taught all of their tank platoons to fire three shots at the designated target and then move on to the next target. Egyptian tank marksmanship was considerably poorer than Soviet marksmanship, and as a result, during the October War, it was often the case that none of the shots fired in the three salvos of an Egyptian tank platoon hit the Israeli tank they had targeted. Nevertheless, because the Egyptians had been taught to fire three salvos and then move on, they would shift their fire to the next target even though they had not actually destroyed the first target they had fired at. In this way, the Egyptians lost a great many tank duels to the Israelis.<sup>122</sup>

For the most part, operations in Arab militaries were conducted "by the book." Arab armed forces taught their soldiers and officers there was only one right answer to any military problem, and only one right way of handling a situation. This right answer was then practiced constantly until it could be performed unthinking from memory. This approach was employed in battle regardless of other factors such as terrain, mission, the forces available, or the enemy's strength and disposition.<sup>123</sup> For instance, one UN observer on the Golan heights in 1973 was amazed at the rigidity of the Syrian attack, remarking that, "It wasn't like an attack, it was like a parade-ground demonstration."<sup>124</sup> The Gulf War Air Power Survey pointed out that, "The Iraqis conducted basic [air force] instruction on a rigid and inflexible pattern. Pilots and instructors executed their

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Kozumplik, Thomas J. Waraksa, *The West Point Military History Series: The Arab-Israeli Wars, The Chinese Civil War, and the Korean War*, (Wayne, NJ: Avery Publishing Group, 1982), pp. 16, 23; Mohammed Heikal, "An Interview with Lt. General Ahmed Ismail," *Journal of Palestine Studies*, Vol. III, No. 2., p. 217; Chaim Herzog, *The War of Atonement*, (London: Weidenfeld and Nicolson, 1975), pp. 34-35, 74; The Insight Team of the London Sunday Times, *The Yom Kippur War*, (NY: Doubleday, 1974), [hereafter referred to as "Insight Team"], p. 224; Edward N. Luttwak and Daniel Horowitz, *The Israeli Army, 1948-1973*, (Cambridge, Ma: Abt Books, 1983), pp. 283-284; National Training Center (NTC), *The Iraqi Army: Organization and Tactics*, NTC Handbook 100-91, 3 January 1991, p. 42; Donald Neff, *Warriors Against Israel*, (Brattleboro, VT: Amana Books, 1988), p. 125; Edgar O'Ballance, *No Victor, No Vanquished: The Yom Kippur War*, (London: Barrie and Jenkins, 1979), p. 27; General D. K. Palit, *Return to Sinai: The Arab Offensive, October 1973*, (Dehra Dun: Palit and Palit Publishers, 1974), p. 40; Stephen C. Pelletiere, *The Iran-Iraq War: Chaos in a Vacuum*, (NY: Praeger, 1992), p. 147; Ariel Sharon with David Chanoff, *Warrior: The Autobiography of Ariel Sharon*, (NY: Simon and Schuster, 1989), p. 263; Ehud Yonay, *No Margin for Error: The Making of the Israeli Air Force*, (NY: Pantheon, 1993), p. 314; Rechavam Zeevy, "The Military Lessons of the Sinai Campaign," in Selwyn I. Tröen and Moshe Shemesh eds., *The Suez-Sinai Crisis 1956: Retrospective and Reappraisal*, (London: Frank Cass and Co., 1990), p. 70; and author's interviews with US military and former Israeli military personnel, 1992-1994.

<sup>122</sup> Author's interviews with former Israeli military personnel, 1992-1994.

<sup>123</sup> See for example, Aker, p. 51; Michael R. Gordon and General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, (Boston: Little, Brown and Co., 1995), p. 104; Eric Hammel, *Six Days in June*, (NY: Scribner's, 1992), p. 143; Herzog, *War of Atonement*, p. 128; Edgar O'Ballance, *The Third Arab-Israeli War*, (Hamden, CT: Archon Books, 1972), p. 90; Safran, *From War to War*, p. 95.

<sup>124</sup> Quoted in Insight Team, p. 134.

maneuvers, 'solely by reference to instruments with little attention paid to outside, visual references.'"125 Chaim Herzog opined that, "The training of the relatively few good [technically competent, that is] people in the Arab forces has been rigid and not conducive to exercise of the ingenuity required during times of stress."126

Arab military personnel further were taught that the "school solution" was not one they were expected to figure out on their own, on the spot. Instead, the correct approach would be told them by higher authority. Arab soldiers and junior officers were taught not to act on their own, but to wait for orders from their superiors.<sup>127</sup> Like sons in a traditional Arab family and students in a traditional Arab classroom, Arab junior officers were trained to remain passive and simply follow the guidance of higher authority. In the words of Egypt's General Shazli, "Our practice had always been to keep junior officers under stultifying strict supervision."<sup>128</sup> For this reason, the Arab air forces took readily to the Soviet practice of ground controllers directing all fighter operations. Indeed, the Arabs took this practice farther than the Soviets ever had, making their pilots so totally reliant on their ground controllers that when deprived of this guidance they simply had no idea what to do, as displayed by the Iraqis in 1991 and the Syrians in 1982.<sup>129</sup> On the effects of this tendency, Edward Luttwak and Daniel Horowitz comment:

In Arab armies, junior officers are used to operating on the basis of written orders rather than on their own responsibility; in combat they seemed to lack the personal initiative and mental flexibility required by a fast-moving mechanized war. When plans were disrupted, most Egyptian units broke down into a leaderless mass of individuals; their officers could pass on orders but failed to provide leadership in the absence of specific guidelines.<sup>130</sup>

Arab soldiers and officers almost universally were taught only a small range of specific skills narrowly related to their mission. Just as Arab school children were taught to consider different subjects discrete and unrelated, so too Arab military personnel were taught to consider the different elements of modern armed forces to be discrete and

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<sup>125</sup> *The Gulf War Air Power Survey, Volume II, Part I: Operations*, hereafter referred to as GWAPS, (Washington, DC: GPO, 1993), p. 76. The quote is from a US Navy SPEAR document on the Iraqi air force.

<sup>126</sup> Herzog, *War of Atonement*, p. 147.

<sup>127</sup> Frank Aker, *October 1973: The Arab-Israeli War*, (Hamden, CT: Archon Books, 1985), p. 110; Cordesman, *After the Storm*, p. 268; Cordesman and Wagner, *The Arab-Israeli Conflicts*, pp. 351-353; Moshe Dayan, *Diary of the Suez Campaign*, (NY: Harper and Row, 1965), p. 35; Insight Team, p. 341; Drew Middleton, "US Aides say Egypt Lacks Ability to Handle Weapons," *The New York Times*, 21 February 1986, p. 8; Tzvi Ofer ed., *The Iraqi Army in the Yom Kippur War*, translated by "Hatzav," (Tel Aviv: Ma'arachot, 1986), p. 96; Author's interviews with US DoD personnel, March 1992 and July 1993.

<sup>128</sup> Lt. General Saad El Shazly, *The Crossing of the Suez*, (San Francisco: American Mideast Research, 1980), p. 47.

<sup>129</sup> Colonel Eliezer Cohen, *Israel's Best Defense*, Translated by Jonathan Cordis, (NY: Orion Books, 1993), pp. 465-472; Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), pp. 144, 197-203; Hirsh Goodman and W. Seth Carus, *The Future Battlefield and the Arab-Israeli Conflict*, (New Brunswick: Transaction Publishers, 1990), p. 26; Gordon and Trainor, p. 104; GWAPS, *Volume II, Part I: Operations*, p. 76; GWAPS, *Vol II, Part II: Effects and Effectiveness*, p. 122; Benjamin S. Lambeth, *Moscow's Lessons from the 1982 Lebanon Air War*, RAND Report R-3000-AF, (Santa Monica, CA: RAND, Sept. 1984), esp. pp. 7-11; Patrick Seale, *Asad of Syria*, (London: I.B. Tauris and Co. Ltd., 1988), p. 381; Francis Tusa, "Lebanon 1982: Israeli Hubris or Syrian Strength?" *Armed Forces*, Vol. 6, No. 9, Sept. 1987, pp. 418-419; Yonay, p. 358.

<sup>130</sup> Luttwak and Horowitz, p. 288.

unrelated. While observing Iraqi operations at the end of the Iran-Iraq War, General Bernard Trainor found that Baghdad's soldiers and officers were "trained to do their specialty and nothing else."<sup>131</sup> Infantrymen were taught to fire their weapons, to dig-in, to camouflage their positions, to attack, and a handful of other very basic skills. However, they were rarely taught how to operate in conjunction with other combat arms, or to perform other skills not specifically related to their basic mission. Often they were not taught anything about how to operate even simple weapons or equipment not directly related to their specialty. Members of crews on larger weapons systems such as tanks, armored personnel carriers and artillery pieces were almost never taught to perform any but their specific roles, so gunners could not substitute for loaders and commanders could not substitute for drivers if necessary. The Egyptians took this tendency to its logical conclusion prior to the October War when they specifically decreed that every soldier should have one task and one task alone, and should only be trained in that one task.<sup>132</sup> The training of each combat branch was strictly limited to the specific operations of that branch, and little or no effort was made to explain the operations and missions of the other branches or the interaction among the different branches. Consequently, Arab personnel were extremely narrowly specialized and had tremendous difficulty integrating their various skills and forces into effective combined arms teams.<sup>133</sup>

Arab armed forces generally suffered from having too little practical field exercises to hone their skills. Like Arab school children, Arab military units were taught skills but weren't always allowed to practice them. Instead, skills and operations were demonstrated to them by instructors and the trainees were made to practice only the simple sub-elements that would have to be combined into more involved procedures in battle. Field exercises were insufficient among most Arab armies, while Arab pilots regularly logged far fewer flying hours than their Israeli or NATO counterparts. Live-fire exercises were extremely rare for both armies and air forces. Moreover, exercises, when they were conducted, were held at small scales and only very infrequently involved large-scale formations as would normally be employed in battle. Thus, on the ground, most Arab army exercises were conducted at battalion-size at best, and usually smaller, while Arab air forces rarely practiced larger than two vs. two engagements and almost never practiced even squadron-level operations.<sup>134</sup> In this area, the massive exercises conducted by the Egyptians between 1967 and 1973 and by the Iraqis after 1986 were noteworthy exceptions and important aspects of their more substantial accomplishments.

Arab training and exercises were hopelessly unrealistic. At every level, Arab drills and maneuvers were heavily scripted. The exercises conducted by Egyptian F-16 pilots of the late 1980s--in which every pilot knew what he was facing, what he would do and when, what his opponent would do and when, and who would "win" in simulated dogfights--were the rule, rather than the exception. In all Arab units in all Arab armies and air forces, the same scripts were repeated over and over again from month to month and year to year. Consequently, Arab personnel simply had to figure out the specifics of the exercise, memorize them and then perform them from memory to successfully

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<sup>131</sup> Author's interview with Lt. Gen. Bernard Trainor, June 1994.

<sup>132</sup> Avraham Adan, *On the Banks of the Suez*, 1991 Edition, (Novato, CA: Presidio Press, 1991), pp. 63-64; Herzog, *The War of Atonement*, pp. 34-35; O'Ballance, *No Victor, No Vanquished*, p. 27; Shazli, p. 42.

<sup>133</sup> See for example, Cordesman and Wagner, *The Arab-Israeli Conflicts*, pp. 54-55, 187; Anthony Cordesman and Abraham Wagner, *The Lessons of Modern War, Volume II: The Iran-Iraq War*, (Boulder, CO: Westview, 1990), p. 60; GWAPS, *Volume II, Part I: Operations*, p. 76; Chaim Herzog, *The Arab-Israeli Wars*, (NY: Random House, 1982), p.145; Palit p. 40; and author's interviews with US DoD personnel, March 1992 and July 1993.

<sup>134</sup> Cordesman and Wagner, *The Arab-Israeli Conflicts*, pp. 86, 200; O'Ballance, *No Victor, No Vanquished*, p. 287; Edgar O'Ballance, *The Gulf War*, (London: Brassey's, 1988), p. 44; Edgar O'Ballance, *The Electronic War in the Middle East, 1968-1970*, (London: Faber and Faber Ltd., 1974), p. 79; and author's interviews with US military, US DoD, and former Israeli military personnel, 1992-1994.



complete their task. Even worse, Arab soldiers and officers frequently were graded based on how they performed their specific tasks and not whether they accomplished the overall goals of the exercise. So for example, ground units were judged on how closely they conformed to the plan of attack, rather than whether they took the objective, and pilots were judged on how well they executed the pre-set flight profile rather than whether they hit the target. In general, Arab training rarely, if ever, attempted to simulate the real problems of battle by unexpectedly changing familiar activities, introducing novel forces or situations, or otherwise surprising the participants. Instead, training drills remained absolutely unchanged from one iteration to the next and training maneuvers followed the same scripts time and again with little variation.<sup>135</sup>

As one example of this, at least up until the October War, the Syrian and Egyptian armies had "obstacle courses" for their tanks and armored vehicles that were never changed, nor were there ever any other surprises involved: the course was always the same and what was expected of the vehicle crews was always the same. Vehicle crews were graded based on how well they conformed to the strict guidelines of the course and not how well they actually handled their vehicles. Thus a typical course for armor might have called for a tank to drive forward for two hundred meters, cross a hill, then drive around an enemy minefield, turn right, drive 30 meters, traverse the turret to the left, fire at a fixed target, traverse the turret back, drive forward another 100 meters, etc. However, tank crews were evaluated based on how they performed these maneuvers and not on whether they actually avoided all of the mines, or found the best way to get from one side of the hill to the other, or even if they hit the target. All the crew had to do was to memorize the distance to drive in each direction, where to turn, where and when to fire each weapon, etc. In no way did these drills actually teach Arab soldiers and officers how best to fight and defeat their enemies.<sup>136</sup>

Just as the Arab educational system has resisted reform, so too the military training systems of most of the Arab countries have proven very difficult to change. On a number of occasions, senior level commanders recognized the need for change, particularly to encourage greater initiative and creativity among junior officers, and tried to encourage their subordinates to inculcate this new emphasis into the training. However, real changes were few, far between, and fleeting. The Arab militaries simply did not know how to change their training methods to produce these different results. Consequently, reform programs often led to changes in rhetoric and curricula, but because the methods did not change, neither did the products.<sup>137</sup> For instance, the

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<sup>135</sup> Aker, p. 51; Lt. Colonel Sergey Ivanovich Belzyudnyy, "Former Soviet Adviser Describes Experiences in Iraq: I Taught Saddam's Aces to Fly," (from *Komsomolskaya Pravda*, 23 February 1991), in JPRS-UMA-91-014, 5 June 1991, pp. 62-63; Anthony Cordesman, "Defense Planning in Saudi Arabia," in Stephanie G. Neuman, *Defense-Planning in Less-Industrialized States*, (Lexington, MA: Lexington Books, 1984), p. 68, fn. 5; Cordesman and Wagner, *The Arab-Israeli Conflicts*, p. 352; Cordesman and Wagner, *The Iran-Iraq War*, p. 83; Chaim Herzog, *War of Atonement*, pp. 34-37, 74-76; Ephraim Kam, "Gulf War Lessons Learned by Egypt," Paper prepared for the Center for National Security Studies, Los Alamos National Laboratory, Los Alamos, New Mexico, March 1992, pp. 16-17; Author's interviews with US DoD officials, March 1992 and July 1993 and US military personnel, May 1993.

<sup>136</sup> Author's interviews with former Israeli military personnel, 1992-1994.

<sup>137</sup> Michael N. Barnett, *Confronting the Costs of War: Military Power, State, and Society in Egypt and Israel*, (Princeton: Princeton University Press, 1992), pp. 123-125; Belzyudnyy, p. 62; Cordesman and Wagner, *The Arab-Israeli Conflicts*, p. 97; Cordesman and Wagner, *The Iran-Iraq War*, pp. 153, 355-356; *The Economist*, "Iraq's Army: The Lessons from the War with Iran," Jan. 12, 1991, p. 36; Zeev Eytan and Aharon Levran, *The Middle East Military Balance, 1986*, (Boulder, CO: Westview Press, 1986), p. 184; Flint et. al., p. 16; Field Marshal Mohamed Abdel Ghani El-Gamasy, *The October War*, Translated by Gilian Potter, Nadra Marcos, Rosette Frances, (Cairo: The American University in Cairo Press, 1993), pp. 155-157; Heikal interview with Isma'il, p. 223; Mohamed Heikal, *The Road to Ramadan*, (NY: Ballantine Books, 1975), pp. 33-35; Heller, p. 46; Herzog, *The War of Atonement*, p. 14; John Keegan, *World Armies*, (London: Macmillan, 1979), p. 196; Korn, p. 91; O'Ballance, *No Victor, No Vanquished*, pp. 26; Palit, p.

Egyptians tried mightily between 1967 and 1973 to get their tactical commanders to show greater independence of judgment, improvisational ability, and aggressiveness in combat. Senior commanders were directed to encourage their subordinates to act in this fashion and to reward them for doing so. However, because the Egyptian method of training continued to focus on rote memorization of basic skills, rigid adherence to tactical doctrine, and the compartmentalization of information and command authority, there was no discernible change whatsoever in the initiative or creativity of their junior officers.<sup>138</sup>

### **Evidence from Iraqi Military Manuals**

This rigid approach to military training was sometimes reflected in the treatment by the Arab armed forces of military manuals. In most armies, manuals provide broad guidance which soldiers and officers are taught to adapt to the specifics of the situation as needed. In most of the Arab militaries, however, manuals were treated as "cookbooks," to be followed to the letter regardless of the specifics of the situation. For example, any number of military officers and experts have observed that Syrian forces generally attempted to follow Soviet doctrine to the letter, in a way the Soviets never intended.<sup>139</sup> In those instances where Arab armies did not employ painstakingly detailed manuals it was generally the case that their armies and air forces had tremendous difficulty following the doctrine. In these cases, Arab armed forces generally acted in such a way in battle that they appeared to have no doctrine at all. For example, Iraqi armored formations during the October War simply could not comprehend and put into practice British bounding-overwatch techniques with the result that Iraqi armored and mechanized formations simply charged at the Israelis in disorganized masses. This almost certainly was the product of Iraq's reliance on translated British armor manuals which provided only general guidelines and principles, rather than a step-by-step explanation of how to act.<sup>140</sup>

A sampling of Iraqi military manuals captured by US military personnel during Operation Desert Storm demonstrate the rote, unimaginative, and unchallenging training methods of Arab forces.<sup>141</sup> Although many are verbatim translations of British manuals,

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83; Pelletiere, *The Iran-Iraq War*, p. 105; Brig. General Robert H. Scales, Jr., *Certain Victory*, (Washington, DC: Office of the Chief of Staff, US Army, 1993), p. 117; Shamir, "Arab Military Lessons from the October War," p. 173; Shazli, pp. 21, 47-49; William O. Staudenmaier, "Commentary: Defense Planning in Iraq: An Alternative Perspective," in Neuman ed., *Defense Planning in Less-Industrialized States*, p. 54; Author's interviews with US DoD officials, March 1992 and July 1993.

<sup>138</sup> Armstrong, p. 173; Barnett, pp. 123-125; Flint et. al., p. 16; Gamasy, pp. 155-157; Heikal interview with Isma'il, p. 223; Heikal, *The Road to Ramadan*, pp. 33-35; Herzog, *The War of Atonement*, p. 14; John Keegan, *World Armies*, (London: Macmillan, 1979), p. 196; Korn, p. 91; O'Ballance, *No Victor, No Vanquished*, pp. 26; Palit, p. 83; Shamir, "Arab Military Lessons from the October War," p. 173; Shazli, pp. 21, 47-49.

<sup>139</sup> See for example, El-Edroos, pp. 338, 495, 519, 537; Insight Team, pp. 134, 179; O'Ballance, *No Victor, No Vanquished*, p. 125. Also see Hammel, pp. 140-143 on slavish Egyptian adherence to Soviet doctrine.

<sup>140</sup> Dupuy, pp. 532-534; Herzog, *The Arab-Israeli Wars*, pp. 303-304; O'Ballance, *No Victor, No Vanquished*, pp. 317-318; Ofer, pp. 128-165.

<sup>141</sup> The manuals I was able to examine were *Manual: Artillery in Battle*, 96-4-20, (Baghdad: Training and Technical Affairs, 1977); *Manual: Hunting Tanks*, (Baghdad: Training Bureau, Combat Development Directorate, Dec. 1983); *Firing Methods from Tanks*, (Baghdad: Ministry of Defense, Training Department, Armor Division, 1990); *Conduct of Fire for Armor Subunits: Platoon/Company*, (Baghdad: Army Chief of Staff, Training Office, Armor Directorate, Jan. 1988); *General Official Handbook Number 759, Handbook: Handling Enemy Defenses for Dirt Covers* (Earthen Berms), (Army Chief of Staff Training Command, Directorate of Combat Development, May 1986); *Guide to the Use of the Armored Branch in all Phases of Combat*, 576-1-8, (Baghdad: Training Office, Armor Directorate, May 1984); *Volume 1, The Art of War; Manual: Battle Group Tactics* (revised), (Baghdad: Office of the Army Chief of Staff, Training Bureau, Combat Development Directorate, Oct. 1987); *Combined Staff Course, Chapter One, Indexation of Infantry Lectures*, Published by the Iraqi Staff College, (Baghdad: 1979); *Volume Three, All Categories: Combat*

others were formulated by the Iraqis based on their own experiences. The indigenously-developed Iraqi manuals go into laborious detail as to exactly how even the most basic military tasks are to be performed--at far greater levels of detail than corresponding British manuals. In most cases, in the Iraqi-developed manuals, tactical situations are depicted as having only one possible "solution." Many of the Iraqi manuals tell an Iraqi commander exactly how to handle a given situation with little allowance for, or encouragement of, flexibility and improvisation. Iraqi training practices and exercises are extremely mechanical: variations and unforeseen circumstances are almost entirely absent from training, and instead the troops simply repeat the same steps over and over again. No effort is made to convey the underlying purpose of different actions, thus it should come as no surprise that Iraqi soldiers and junior officers generally did not understand why they took certain actions in response to certain situations and consequently were unable to adapt techniques to unforeseen circumstances.

For instance, in a May 1986 manual on how Iraqi armored formations were to conduct counterattacks against hasty Iranian defenses (especially earthen berms) erected after breaking through an Iraqi defensive position, the Iraqi training staff felt it necessary to include the most mundane details. The manual takes the reader through every last step in the operation, including actions that should be standard procedure in all military operations and all counterattacks. Indeed, the parts of the manual related to specific features of this particular kind of operation--how the Iranians attack and set up their hasty defenses after a penetration, their weaknesses while conducting such an operation, and how to go about attacking them--actually make up a very small percentage of the manual. Instead, the vast majority of the manual is a detailed account of how to conduct any armored offensive operation--information that should be covered in the basic manuals on armored operations and not in a supplementary manual on a specific type of operation. Although the manual is intended for brigade-level operations, it still contains instructions for the brigade artillery commander to make his registration fire appear to be part of normal operations so as not to tip-off the enemy; it warns tank and mechanized infantry formation commanders to redirect their fire to the flanks so as not to kill friendly infantry when they dismount and advance in the center; and it explains precisely when tanks are to start and stop firing.<sup>142</sup> As an example of the level of detail contained in this manual, the section on preparation for the attack admonishes the commander:

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*Area Defenses and Fortifications*, (Baghdad: The Training Department, Combat Development Administration, June 1987); *Appendix K to the Manual, "The Infantry Battalion Battle" -- Revisions Relating to the Combat Employment of Infantry battalions in Light of the Infantry Battalion (Provisional) of 1987*, (Baghdad: Army Chief of Staff, Training Office, Combat Development Directorate, Apr. 1988); *Fixing T-72 Breakdowns During Battle*, (Iraq: Republican Guard 9th Armored Brigade, 56th Tank Battalion); *Experimental Manual No. 62, Defense Against Modern Attack Helicopters*, Second Edition, (Baghdad: Army Hqs, Directorate of Training, Department of Combat Readiness, Jan. 1987); *Poisoning by Biological and Chemical Agents in the Field: Protective Measures and Treatment*, (Baghdad: Ministry of Defense, Combat Development Directorate of the Training Bureau, June 1989); *Guidelines for Specialized Tank Fire*, (Baghdad: Ministry of Defense, Training Office, Armor Directorate, Oct. 1990); *Manual: Tactical Use of Flame and Smoke in Corps Offensive and Defensive Operations*, (Baghdad: Army Chief of Staff, Chemical Corps Directorate, Dec. 1981); *Standard Operating Procedures for an Iraqi Republican Guard Infantry Brigade*, (Baghdad: 1986); *Notebook: Training Course for Warrant Officers, Procedures and Maintenance for T-55 Tank*, (Tank Battalion 77); *Official Notebook No. 58, Notebook Number 12, Basic Training Examinations and Distance Estimates for the Infantry Divisions*, Fifth Edition, (Baghdad: Army Central Command, Training Circuit, Infantry Administration, Nov. 1983); *Manual: Concepts of Defense in Mountainous Areas Against a Conventional Enemy*, (Iraq: Training Bureau, Combat Development Directorate, May 1984).

<sup>142</sup> *General Official Handbook number 759, Handbook: Handling Enemy Defenses for Dirt Covers [Earthen Berms]*, Army Chief of Staff Training Command, Directorate of Combat Development, May 1986, pp. 37, 40.

Fourth, in order to gather information for developing objectives, the following sources of information are tapped, from which information is gathered and analyzed to come to conclusions, or they may be converted to intelligence reports by the intelligence cell at the corps or division levels or below.

- 1) Our front troop observation points, including reserve points for observing our artillery.
- 2) Overlays featuring fire plan targets for our defensive troops.
- 3) The overlay showing the location of the enemy mortars and artillery, kept by the artillery commanders.
- 4) The overlay for immobilizing enemy concentrations. The areas of his effectiveness as defined by land observation radars.
- 5) Aerial photography, after scrutinizing them and highlighting the information they contain about enemy troop concentration on the maps.
- 6) Air reconnaissance for commanders and consultants or information obtained by air observation points if available.
- 7) Analyzing the movement area and available information in the headquarters to use them in gathering information about the terrain, critical terrain, features, obstacles, and so on and so forth.
- 8) Prisoners of war who have been interrogated or those who surrendered as refugees to our troops.
- 9) Areas of enemy activities and his daily routine as detected by our front troops, such as distribution of rations, approaches, departure and return time for patrols and time of their return, ambushes areas, screen line, etc.
- 10) Headquarters location and areas of his effectiveness as determined by the technical equipment system.
- 11) Documents such as maps that can be obtained by our troops during a raid, combat patrol or an ambush.<sup>143</sup>

Likewise, in the ten pages of instructions on how to conduct the artillery bombardment prior to the counterattack one finds a seemingly endless series of instructions such as the following:

The concealing fire is taken off the second cover by the observation officers accompanying the attacking infantry when our troops start the attack to occupy the first cover [the first Iranian defense line] for a distance not less than 400 meters for the dismounted infantry and 200 meters for the mounted infantry. At this point the infantry soldiers prepare the assault hand grenades to hurl at the cover or behind it before climbing the cover to keep the enemy in hiding. A switch is then made to dog fight [hand-to-hand combat?] and close engagement to kill the remaining enemy elements in their positions, on or behind the dirt cover [earthen berm] with a view to purging the cover. Meanwhile, firing continues at the second dirt cover during the dog fight at the first cover and the time it takes to open passes, which is about 10-15 minutes. . . .<sup>144</sup>

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<sup>143</sup> Ibid., pp. 24-25. One wonders if, given the tremendous difficulty Baghdad had in getting its tactical commanders to perform any of the intelligence gathering operations included in this list, this was not an effort to remind Iraqi junior officers that they were supposed to be conducting these actions.

<sup>144</sup> *Handling Enemy Defenses for Dirt Covers* (Earthen Berms), p. 39.

In short, the manual is a "cookbook" which a tactical commander can use as a step-by-step guide to conducting these operations without having to rely on any basic understanding of armored counterattack operations. This level of detail might seem excessive in Western armed forces if found in a company level manual, and would be simply unheard-of in a brigade-level manual. Overall, the impression one gets from reading Iraqi manuals from the later years of the Iran-Iraq War is that the Iraqi high command had by then figured out how to beat the Iranians but they just could not get their troops to do the things needed to win. Consequently, their training and doctrine became ever more detailed in hope that they could lead their tactical commanders "by the nose" through the specific actions necessary to defeat the Iranians in battle.

### *British-Based vs. Indigenously-Developed Iraqi Manuals*

Some of the more interesting patterns to emerge from an examination of the Iraqi manuals captured during the Gulf War regard the differences between the British-based and indigenously-developed manuals. The majority of Iraqi manuals recovered by US forces in the Gulf War were word-for-word translations of older British (and sometimes newer British, French, and American) manuals. However, a considerable minority were written by the Iraqis from their own experiences and designed to suit their specific needs. The distinctions between these two sets of manuals sheds considerable light on Arab training procedures.<sup>145</sup>

The most striking differences between the British-based and the indigenously-developed manuals are in their rigidity. The British manuals provide general principles which field commanders are supposed to employ and adapt as necessary to handle any situation. In many cases, supplemental manuals offer guidelines on how best to adapt the general principles for specific situations--such as in unusual terrain like mountains or deserts. On the other hand, the Iraqi manuals present only one possible solution to any given tactical situation. This solution is presented in tremendous detail in a step-by-step fashion so that any commander will know exactly what he is to do at every stage. Commanders are exhorted to follow these guidelines to the letter, and there is not even the suggestion that it may prove necessary to adapt or alter some of the methods presented to suit particular circumstances.

Finally, most of the British manuals were written much earlier than the indigenously-developed ones. Most of the British-based manuals were issued by Baghdad to its troops before the Iran-Iraq War or during its very early stages. By contrast, most of the indigenously-developed manuals were issued during the later years of the Iran-Iraq War or afterwards. In the later, indigenously-developed, manuals, the Iraqis do not depart from British doctrine so much as they refine it, describe it in far greater detail, and ossify it. The Iraqis reduce British doctrine to a series of rigidly prescribed steps allowing for little or no variation to allow for unique circumstances. This trend suggests that the Iraqis were dissatisfied with their British manuals, not because they found the doctrine misguided, but because they found them too vague and left too much up to the judgment of the commander on the spot. They appear to have set out to remedy this problem by detailing actions far more precisely and by expunging the flexibility encouraged by the British approach. This almost certainly reflects the trend

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<sup>145</sup> A far smaller number of Iraqi manuals were from other sources, mostly Soviet. For example, the Iraqis copied the Soviet manuals for the operation of Soviet-weapons systems (an obvious necessity) as well as a number of other technical subjects. In addition, the Iraqis seemed to employ Soviet manuals in a few areas where they undoubtedly found the British doctrine very skimpy because of differences in Soviet and British military styles. For example, Soviet-derived material predominates in Iraqi tactical manuals on ground-based air defenses and chemical warfare. Finally, in a few places in other manuals Soviet influences are apparent. For example, several Iraqi manuals reflect the Soviet obsession with precisely defined unit frontages, while a small number of other manuals (mostly British-based texts) have a page or two at the end that briefly note the Soviet approach to the same kind of operation.

throughout the war with Iran toward greater micromanagement and scripting of operations by Iraqi senior commanders to relieve junior officers of the need to make decisions--which the disasters of the early part of the war demonstrated they were simply incapable of doing.

The differences in these two different kinds of manuals can be illustrated by a simple comparison. The paragraph below is from an Iraqi artillery manual drawn heavily from the artillery course at the Iraqi General Staff college, and is a verbatim translation of British material--indeed, the Iraqis did not even bother to change the names of equipment used in the material from British army weaponry to the mostly Soviet equipment used by the Iraqis.

No attempt should be made to launch assaults with mechanized infantry without support from artillery and tanks. The tanks provide reliable support to infantry even though they might be moving on a different axis. Tanks may precede infantry in advancing toward the target or they may provide fire support from a nearby side position. All this depends on the terrain and on the ability to resist hostile tanks. Anyhow, if the tanks cannot advance because of the anti-tank fire, the armored personnel carriers cannot advance either. In this case, if the terrain is suitable, the infantrymen should dismount and advance on hidden approaches to clash with the enemy. After the sections are dismounted, the armored personnel carriers usually remain on or near the target to provide fire support. But they may have to move backward to hide in what is called the "main assembly of carriers." The line at which dismounting occurs may be predetermined or determined by the commander during the assault.<sup>146</sup>

The second set of paragraphs comes from the (indigenously-developed) 1986 manual on counterattacking hasty Iranian defenses (fortified earthen berms) at brigade-level.

. . . After the tanks begin the attack, they will [each] be followed at a distance of 300-600 meters by an armored personnel carrier carrying mechanized infantry. This carrier will proceed at the same speed. When the tanks arrive at a point 700-800 meters from the cover [berm], their gun firing will not be effective. They will therefore have to use their pivotal machine guns, at which point the armored personnel carrier will accelerate its speed to catch up with the tanks, and then go through them and pass them by. In the last 300 meters all weapons mounted on the carrier will start firing, including the infantry weapons. When the carrier is 10 meters from the target, the two soldiers at the front hurl grenades at the target while the infantry carriers dismount and the tanks reach the target at the same time. Any surviving enemy infantry will be killed then and a foothold at the target will be (illegible, [probably "secured"]).<sup>147</sup>

. . . The attack is so designed with the infiltration of carriers through the tanks in order to define the role and responsibilities without leaving such crucial matters loose and up to the two specialties to decide who should reach the target first. For it has been established from analysis of previous battles that when there is a joint attack on the same target, infantry personnel wait for the tanks to reach the target first. Therefore, the

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<sup>146</sup> *Combined Staff Course, Chapter One, Indexation of Infantry Lectures*, Published by the Iraqi Staff College, (Baghdad: 1979), pp. 73-74.

<sup>147</sup> *Manual: Overcoming Enemy Earthworks Defenses*, p. 17.

carriers reduce their speed in the final phase of the assault to go behind the tanks, while the tank crew wait for the carriers to reach the target before them. Therefore, the tanks would reduce their speed to let the carriers go ahead of them. As a result they advance very slowly and the attack loses its momentum in the last phase. This gave the enemy a chance to fire at our tanks and carriers with its weapons. Once one or two of them is hit, the whole force comes to a halt and is compelled to turn around and return and the assault would then be defeated. For this reason and to prevent this from happening again, the tactic already mentioned has been developed whereby each specialty has a defined responsibility as to what is expected of it.<sup>148</sup>

The difference between the generalities and adaptability of the first paragraph and the rigidity and specificity of the second pair of paragraphs is striking. Indeed, the paragraphs from the indigenously-developed manual indicate that Iraqi senior commanders were having such difficulty getting their subordinates to conduct combined arms properly that their solution was to go into even greater detail and to specify exactly when and how each element of an armored force (in this case a brigade) was to arrive at the target.

Although we do not possess a complete set of Iraqi military manuals it appears generally to be the case that the Iraqis employed British-based manuals for most of the more general kinds of military operations, and then wrote their own manuals to cover very specific situations encountered by Iraqi forces on a constant basis during the Iran-Iraq War. Thus, the Iraqi manual on Desert Operations is a verbatim copy of the British version, just as the Iraqi General Staff College lectures on artillery operations are drawn overwhelmingly from British staff officer courses. By contrast, the Iraqis developed their own manuals for such operations as defending against human wave attacks, how to counterattack to retake their own earthworks after they had been overrun in an Iranian attack, and how to use tanks to defeat light infantry using small boats to cross marshlands. This strongly suggests that when push came to shove, the Iraqis found the British approach inadequate for their needs. For those critical battle situations in which Iraqi forces repeatedly found themselves while fighting the Iranians, Baghdad went back and drafted its own "cookbooks" to explain in great detail to its tactical commanders exactly how to deal with the situation, leaving little or nothing up to the judgment of the commander on the spot.

Similarly, the Iraqis relied almost entirely on British-based manuals for strategic-level operations but developed many of their own indigenous manuals for tactical-level operations. For example, most Iraqi ground force manuals above brigade-level are British copies, while many of the more tactical manuals for armor, artillery and infantry are indigenously developed. This suggests that, although the broad guidelines and general principles proffered by the British manuals were considered adequate for more senior Iraqi officers, Baghdad felt compelled to provide its own, far more detailed and rigidly directed guidance to its junior officers. Indeed, toward the latter half of the Iran-Iraq War, all Iraqi manuals began to be published with an "Order" from Army Chief of Staff Lt. General Nizar 'Abd al-Karim Faysal al-Khazraji stating, "This manual has been published for the training of members of the armed forces. They must all comply with its provisions precisely."

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<sup>148</sup> Ibid., p. 18.

## Conclusions

In retrospect, the pattern by which Arab culture was transmitted to Arab soldiers and officers seems obvious. Over the centuries, Arab culture developed a method of teaching which inculcated the values of the dominant culture. This method of teaching, first encountered by all Arabs within their families and then later by those who would have some formal education in the Quranic schools, became the model for all teaching. This is true of all cultures: every society has its own ways of imparting knowledge from one person to another. This way of teaching is so "natural" to the members of the society that they use it in all ways to convey all knowledge to anyone in any situation. It is simply how one teaches something to someone else. It is only after exposure to the educational method of another culture that a person is likely to even recognize that there is more than one way to teach something to someone. For all of these reasons, it wasn't just natural that Arab militaries would employ the teaching method of the larger Arab society to train men to be soldiers and officers, it was probably inevitable. Indeed, it would have been remarkable if the Arabs trained their men in a manner that differed from the dominant method of teaching in the broader society.

These findings make a powerful argument in support of the Arab culture theory. They demonstrate that Arab culture has a specific educational method that produces the patterns of behavior identified as elements of the dominant culture. They demonstrate that Arab personnel are taught to act and think in certain ways as a result of the long process of education both within the family and then in their schools. Although it is conceivable that a process of military training could condition them to act differently from the manner encouraged by the society at large, Arab military training does not seem to have this impact. Indeed, Arab military programs, modeled as they are on the educational methods of the larger society, actually reinforce these patterns of behavior. The result are soldiers conditioned to act and think in certain ways--ways that reflect the values and priorities of the dominant culture.

Given the fact that these men have been trained to act and think in such a way for 20 years or more, how could they possibly be expected to act otherwise? Indeed, given that they have been taught to behave in this fashion for so many years, it requires a great deal of explanation to claim that something else could be producing corresponding patterns of behavior on the battlefield. At most, other factors--incentive structures existing within the military itself such as those derived from politicization--can only be said to have a reinforcing, or complementary, effect. Likewise, it is clear that Arab battlefield behavior does not necessarily result from the absence of certain experiences--such as exposure to machinery or work in an industrial economy--but from the constant inculcation of cultural values found in the educational methods of the Arab world.



## Chapter 13

### Does Arab Military Effectiveness Improve When the Influence of Arab Culture is Mitigated?

In most of this study I have proceeded from the assumption that Arab culture was a constant influence on Arab militaries between 1945 and 1991. Although this was mostly true, it is not completely accurate. To some extent, the influence of Arab culture on different Arab militaries varied. At certain times, in certain countries, Arab culture had a greater or lesser impact than was the norm. This chapter examines several instances when the influence of Arab culture upon Arab militaries was reduced. The Arab-culture theory predicts that under such circumstances, Arab military performance should have improved in a corresponding fashion.

At least three Arab armies found ways of mitigating the impact of Arab culture on their soldiers and officers. In 1973, the Egyptians developed an elaborate method of heavily-scripted, constantly-rehearsed, set-piece operations. In 1988, the Iraqis adopted a similar practice. Both the Iraqis and Egyptians were able to reduce the impact of culture by taking all decision-making out of the hands of their junior officers, thereby avoiding the most pernicious problems created by Arab cultural patterns--those related to poor tactical leadership. By contrast, the Jordanians between 1948 and 1956, and to a lesser extent through 1991, reduced the impact of Arab culture by developing a wholly different sub-culture for their military. This sub-culture was strongly Bedouin and bore the heavy stamp of the British military tradition, creating different behavioral patterns from that of the dominant Arab culture. In other words, the Jordanians essentially broke the transmission mechanism described in Chapter 12 by teaching their soldiers and officers to act and think in a manner different from that taught by traditional Arab education and typical Arab military training. As predicted by the Arab culture theory, in each of these cases, the Arabs performed significantly better than was the norm for Arab armed forces during the postwar period.<sup>1</sup>

In the first part of this chapter, I examine these three cases. I demonstrate that in each case, the effects of culture on the armed forces were significantly reduced. I then show that military performance was correspondingly better, and better in those specific categories of military operations in which the effects of culture were eliminated or mitigated.

There also were a number of other instances in modern Middle East military history when Arab armed forces performed better than was the norm. These were the anomalies I specifically did not address in Chapter 11. A skeptical reader might believe that these cases contradict the Arab-culture theory if it were the case that Arab militaries

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<sup>1</sup> There almost certainly were instances when Arab culture had a *greater* than normal influence on Arab militaries. In such cases, the Arab-culture theory would predict that those Arab states that more strongly manifested the patterns of culturally-regular behavior would also experience greater difficulties with military operations in those areas predicted to be problematic by the theory. I have chosen not to pursue this line of inquiry because Arab culture was quite pronounced in all of the Arab states and it would be extremely difficult to make a good case as to why one state manifested Arab cultural traits stronger than others. Culture does not lend itself easily to such precise measurements.

performed better than normal and there was no reason to believe that the effects of culture had somehow been reduced. Unfortunately, there is painfully little evidence to illuminate the causes of these anomalies. Nevertheless, in the second half of this chapter, I address each such exception and lay out a plausible explanation that is consistent with the Arab-culture theory. Moreover, I note that none of the competing theories can offer even a reasonable explanation for these anomalies. Thus I argue that these cases also probably constitute exceptions to the Arab-culture theory that prove the rule because the rule did not apply to them.

This chapter employs a combination of process-tracing and congruence testing to determine whether Arab military effectiveness was better than average when the influence of culture was reduced. First, I employ the process-tracing method to establish that the causal chain between Arab culture and Arab military effectiveness was somehow interrupted in each case. I trace the transmission mechanism described in Chapter 12 and demonstrate that one or more elements have been left out or circumvented. Second, I employ the congruence method to establish that the outcomes (Arab military effectiveness) are the opposite of that predicted by the Arab-culture theory. In other words, in those areas where Arab culture has been prevented from influencing Arab military performance, the Arab-culture theory predicts that Arab armed forces will perform in the manner opposite of that which the theory normally would predict.

### **Avoiding Areas of Weakness**

At least two Arab militaries, the Egyptians in 1973 and the Iraqis beginning in 1988, adopted a unique method of military operations that allowed them to avoid traditional areas of Arab weakness in combat.<sup>2</sup> This approach was deliberately developed to try to compensate for the problems created by the extremely limited abilities of Arab tactical commanders derived from culturally-regular patterns of behavior. Given this careful structuring of military operations, the Arab-culture theory predicts that the Egyptians and Iraqis should have enjoyed substantially greater military effectiveness as long as they could adhere to this method. The theory also predicts that whenever the Egyptians and Iraqis were unable to adhere to this method their combat operations should have reverted to the "normal" patterns of Arab military ineffectiveness.

#### **How the Egyptians and Iraqis Mitigated the Effects of Arab Culture**

Essentially, the Egyptians in 1973 and the Iraqis after 1988 relied on four basic elements in their military operations that allowed them to avoid the limitations on military effectiveness created by aspects of the dominant Arab culture. First, they attempted to remain on the defensive whenever possible to capitalize on their greater skill in static defense operations. Second, when it was necessary to attack--either as part of a general offensive strategy or merely for counterattacks as part of a defensive posture--their attacks were conducted as set-piece operations. This was done to try to prevent operations from devolving into the fluid, unstructured battles in which the Arab armies fared so poorly. Third, these set-piece operations were scripted in great detail by the highest military planners. Plans were drawn up in exhaustive detail and then practiced repeatedly until they could be performed by their troops from memory. Fourth, operations were kept very limited, both in terms of time and space.

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<sup>2</sup> The Syrians in 1973 also employed the same method. This was the reason for their greater success during the first two days of the October war. However, the Syrians were unable to employ this method to the same extent as the Egyptians or Iraqis and, as a result, Syrian forces were not as successful as the Egyptians or Iraqis.

By remaining on the defensive whenever possible, the Egyptian and Iraqi militaries were able to capitalize on the various cultural traits that aided their conduct of static defensive operations as well as the inherent advantages that accrue to any defender.<sup>3</sup> Similarly, by employing only set-piece offensives when forced to attack, the Egyptian and Iraqi militaries were able to avoid getting involved in the fluid, unstructured battles in which their culturally-derived weaknesses in ad hoc operations, flexibility, creativity, information handling, and tactical maneuver were most damaging. In addition, relying on set-piece battles greatly improved the ability of the Egyptian and Iraqi generals to script their operations and keep them limited.

The detailed scripting of Egyptian and Iraqi set-piece offensive operations, and their constant rehearsal by the field formations, were the single most important reason for the relative successes enjoyed by the Egyptians and Iraqis. Essentially, the combination of meticulously detailed orders from the senior planning staffs plus endless practice of these plans by the tactical formations relieved junior officers from many of the responsibilities of command. Egyptian and Iraqi tactical commanders did not need to be able to think independently or creatively; they did not need to be able to take the initiative and seize fleeting opportunities; they did not need to understand how to integrate their various forces into cohesive combined arms teams; and they did not even need to actually understand the purpose of their actions. By scripting their offensives and having their forces learn to execute them like clockwork, the Egyptian and Iraqi high commands effectively assumed the burden of all decision-making--and made all necessary decisions ahead of time. In this way, they avoided the crucial failings of their tactical commanders in leadership and decision-making.

Keeping their offensive operations limited in scope and duration was an important addendum to scripting operations. The one great flaw in this method of warfighting was that it was a deliberate attempt to subvert what Clausewitz called "friction." In these operations, the Egyptians and Iraqis committed a cardinal sin of military operations: they drew up elaborate plans and then attempted to execute them dogmatically. Every military academy and staff college in the West (and in the former USSR) warns against this because, in war, nothing ever goes as planned. Consequently, the bane of these Arab operations were unexpected developments such as natural phenomena, the actions of the enemy, simple human error, etc., that would cause the course of battle to diverge from the plan. Because friction increases exponentially with each additional increment of time (and size), the Egyptians and Iraqis had to keep their operations limited to minimize friction and thereby minimize the extent to which their meticulously scripted and rehearsed plans were likely to diverge from reality.

### **Egypt, 1967-1973**

This approach to military operations was first employed by General Isma'il and the Egyptian General Staff after the debacle of 1967. Isma'il's approach centered on the idea of structuring military operations in such a way that battles would be fought and decided by operations that the Arabs performed well, and not by operations with which they had difficulty. The Egyptians deployed enormous numbers of antitank and antiaircraft weapons to neutralize Israeli armor and air power and to prevent the Israelis from forcing the Egyptians to fight a fluid war of maneuver that would bring out all of their problems with tactical initiative, innovation, and flexibility. In addition, by seizing the initiative, the Egyptians were able to "steal a march" on the Israelis and force them to try to oust the Egyptians from heavily defended positions. This combination of a strategic offensive coupled with a tactical defensive allowed the Arabs to fight the Israelis in the manner they were best suited to--static defensive operations--and to avoid the fluid armored battles in which they were regularly defeated. To execute these operations, the

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<sup>3</sup> Thus in this area they did not necessarily mitigate culture completely, but simply mitigated those aspects that were most damaging while attempting to capitalize on those areas that were most useful.

Egyptian General Staff planned out every detail of the offensive to the extent of specifying the exact task of every soldier at every step of the operation. The Egyptian troops then practiced these tasks over and over on full-scale mock-ups of the canal and its adjoining terrain until they could execute their orders from memory.

This plan worked superbly. The initial Egyptian assault across Suez and subsequent repulsing of the first Israeli counterattacks was conducted as well as any military operation of such size could have been. Egyptian movements were crisp, efficient, smooth, and well-coordinated. Egyptian units demonstrated a superb integration of armor, infantry, anti-tank, artillery, air defense, and engineering forces. Egyptian units seized and held the initiative, moving from one objective to the next with a minimum of confusion. Egyptian units established strong defensive positions and defended them fiercely against Israeli counter-attacks. The Israelis were stunned by the new proficiency of the Egyptians.

The subsequent Egyptian debacle during the second phase of the October War, however, illustrates that those problems of military effectiveness associated with culturally-regular Arab patterns of behavior had not actually been solved, but had merely been skirted. During the attacks on October 14th and thereafter, Egyptian forces demonstrated little of the effectiveness that had so startled the Israelis during the initial assault on the Suez Canal. In the attacks on the 14th and for the remainder of the war, Egyptian forces were committed to battle piecemeal. Combined arms coordination was virtually non-existent as tanks rode into battle without any infantry or artillery support, despite having witnessed the slaughter of similarly unsupported Israeli tanks during the previous eight days. Egyptian units consistently failed to take advantage of opportunities created by the flow of battle. For example, counterattacks had to be ordered and organized by the highest levels of command as lower-level commanders consistently failed to show initiative. Although the Egyptians fiercely defended their gains, they did so primarily by remaining dug-in and blasting away at the Israelis: they made virtually no effort to maneuver against the Israelis or to attempt to disrupt their operations by pressuring the Israelis' flanks. Indeed, the only effort to cut off the narrow Israeli corridor to the Suez canal was the major counterattack organized by the Egyptian high command on 17 October, which was executed extremely poorly by Cairo's tactical commanders.

### **Iraq, 1986-1990**

While it is unclear whether they learned this approach from the Egyptians or came to it on their own, by 1986, the Iraqi General Staff had learned the same lessons General Isma'il and his officers had discovered almost twenty years before. After six years of almost constant set-backs at the hands of the pitifully-armed but highly-motivated Iranians, Iraq completely revamped its approach to military operations. The General Staff began to emphasize intricately detailed operational planning and extensive, repetitive training of a fairly small number of elite units to execute its major operations. Initially, Baghdad applied this new method to counterattacks against Iran's human-wave offensives. Iraqi armored reserves were issued extremely detailed plans and practiced them constantly so that when the Iranians attacked, the Iraqi forces were able to execute the planned counterattacks with well-rehearsed precision.

In 1988, Iraq went on the offensive with its new approach. The five offensives Iraq launched against Iran, beginning with the reconquest of Al Faw, were exceptionally well-planned and well-executed operations. The General Staff had planned the attacks down to the last detail and the Republican Guards and other units involved had repeatedly rehearsed their operations on life-size mock-ups of the battlefield. As a result, the Iraqis smashed the Iranian army quickly and decisively in a way it never had been able to before. Likewise, the Iraqi invasion of Kuwait in August 1990, while not exactly the equal of the German conquest of France in 1940, was a very competent operation, resulting in the conquest of the emirate in less than a day.

The change in Iraqi operational performance with the implementation of the new approach to campaign planning was fairly remarkable. Previously, Iraqi operations had been characterized by slow, halting movements; frontal assaults; an almost total lack of combined arms operations; the use of tanks as little more than movable pill-boxes; an absence of tactical or operational maneuver; and a reliance on overwhelming firepower as the only solution to tactical problems. After 1986, Iraqi counter-attacks, and later, Iraqi offensives, demonstrated excellent combined arms cooperation, use of maneuver to outflank and demoralize Iranian forces, reliance on both the shock power and maneuverability of armored forces, swift, fluid movements of armored and mechanized forces conducting penetration operations deep into the rear areas of the Iranian forces, and constant pressure on the Iranians to seize and hold the initiative.

Although the concentration of high-quality personnel and equipment in an expanded Republican Guard and a small number of other units contributed to this dramatic improvement in Iraqi military effectiveness, this was a relatively minor factor. The principal cause of Iraq's new-found proficiency was the General Staff's reliance on highly-detailed and constantly-rehearsed campaign plans. Like the Egyptians in October 1973, as long as the competent planners of the General Staff were able to script the combat operations of their forces, they enjoyed great success. The planners were able to write maneuver and combined arms cooperation into the script of the campaign plan, and then it was simply up to the field commanders to execute their detailed and well-rehearsed orders. In these operations, the Iraqi forces appeared to exhibit a high degree of military proficiency, but in fact, they were simply implementing tasks that had been learned by rote. This became apparent whenever the course of battle unexpectedly diverged from the plan and field commanders were left to their own devices. Whenever Iraqi forces encountered a situation unforeseen by the General Staff's planning, their units reverted back to their previous patterns of ineffectiveness. Combined arms coordination broke down immediately, swiftly moving mechanized forces suddenly slowed to a crawl, units ordered to attack resorted to frontal assaults, and most forces simply halted and waited for further orders. In other words, the problems associated with patterns of culturally regular behavior immediately reasserted themselves.

This pattern of behavior was clearly displayed during the Coalition ground offensive during the Gulf War. The only elements of this approach that the Iraqis were able to employ was that they did conduct a set-piece offensive against Kuwait and then opted for a defensive strategy against the US-led Coalition. Otherwise, Coalition forces seized the initiative and held it throughout the war, forcing the Iraqis to fight at a pace and in a manner that they had not expected. The Iraqis were unable to implement their pre-planned operations and consequently, Iraqi counterattacks were clumsy frontal assaults. Although some units, particularly the Republican Guards, fought fiercely they generally remained in their defensive positions, preferring to blast away at Coalition forces rather than to get out and maneuver against Coalition flanks. Likewise, even the Republican Guard's junior officers showed little imagination fighting Coalition forces and rarely showed any initiative by seizing opportunities in the midst of battle.

### **Conclusions from the Egyptian and Iraqi Cases**

The performance of both the Egyptian and Iraqi armed forces strongly conformed to the predictions of the Arab-culture theory. As long as the Egyptians and Iraqis avoided ad hoc operations and fluid maneuver battles, scripted their operations to avoid the necessity of having their tactical commanders make decisions, and kept their operations limited to minimize the ability of friction to subvert their scripting, they enjoyed considerably greater military effectiveness. Moreover, whenever their operations were disrupted by friction or else simply ran out of script, the patterns of poor military performance common to Arab armies and air forces suddenly reemerged. Thus, only when the influence of culture upon their armed forces were mitigated by reliance on limited, set-piece missions and heavily-scripted operations to alleviate the need for

aggressive, creative tactical leadership, did the Egyptians and Iraqis perform well. Whenever they were prevented from employing these methods, they reverted immediately to form, as predicted by the Arab-culture theory.

### **Distinctive Military Cultures**

At least one Arab military, the Jordanian Arab Legion, developed a unique military culture, different from that of the dominant culture of its civilian society. The modern Jordanian military was created by the British, infused with British military traditions and manned mostly by Bedouin. These influences combined to create a Jordanian military with different values and behavioral patterns from that of the larger Arab society. This was not necessarily deliberate on the part of the Jordanians--or the British, for that matter--but it was effective nonetheless.

Because Jordanian military culture did not necessarily reflect the dominant Arab culture, the Arab-culture theory predicts that Jordanian military effectiveness should have been better than that of other Arab armies, or at least different. In particular, it predicts that in those specific areas in which Jordanian military values differed from the values of the larger society, Jordanian military effectiveness should have been better or different from that of other Arab armies. In addition, the Arab-culture theory predicts that to the extent that this cultural distinction faded and the dominant Arab culture reasserted itself within the Jordanian military, Jordanian military effectiveness should have declined and begun to more closely resemble the military effectiveness of other Arab armies.

### **How a Distinctive Military Culture Mitigates the Influence of Arab Culture**

All militaries, as large organizations have their own culture. Usually, the military's culture will have much in common with the culture of the larger society of which it is a part. However, this does not have to be the case. Some militaries have cultures that are very different from those of the larger society. For example, Stephen P. Rosen has described how the Indian military developed a culture under British tutelage that often resembled British military culture--and thus by extrapolation, English culture in general--more than it did traditional Indian culture.<sup>4</sup> Thus a military may have a culture different from that of the larger society, which would then produce behavioral patterns among its soldiers different from those normally found in the larger population.

Essentially, the Arab Legion broke the transmission mechanism outlined in Chapter 12. They recruited young men from a sub-culture rather than from the society at large, and therefore they started with recruits who did not necessarily espouse the dominant Arab cultural values. During the early days of the Legion, recruits began as young boys and were taught in Legion schools that used a different teaching method than that employed in the schools of the larger Arab society. The Legion itself used a very different military training method than that of other Arab armies, further differentiating the values and behavioral patterns of Jordanian military personnel from those of other Arab soldiers and officers. Service in the Legion was voluntary and terms were lengthy, thus Jordanian military personnel had many years to absorb the different culture of the Legion, in contrast to the mass armies of the other Arab states where personnel turned over so quickly that there never was time to inculcate personnel into a different cultural system. Finally, especially in its early days, the Arab Legion relied heavily on foreign (British) officers, who brought their own culture (and its different influence on military operations) with them. As could be expected, this very different process of recruitment and education resulted in a very different pattern of military effectiveness.

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<sup>4</sup> Stephen Peter Rosen, *Societies and Military Power: The Indian Army in Comparative Perspective*,

## The Jordanian Armed Forces

Jordan's distinct military culture derived from three complementary sources. The first was Amman's deliberate effort to man the ranks of its combat formations with Bedouin soldiers and officers. The second was the British military influence that continues to survive in the Jordanian armed forces even to the present, although it has been on the wane since 1956. The third was its reliance on a small force of long-term service professional soldiers. The combination of these three factors allowed Jordan to mitigate certain aspects of the influence of Arab culture on its personnel. Essentially, the small size and long-terms of service of Jordan's armed forces allowed the Jordanians to fully inculcate highly-motivated volunteer soldiers into a culture that was subtly different from that of mainstream Arab society because of its strong Bedouin and British influences. Thus, in many areas of military operations, Jordanian forces did not exhibit the patterns of military ineffectiveness associated with Arab cultural patterns of behavior. In addition, the Jordanian military system endowed Jordanian forces with certain strengths that generally were not found in other Arab militaries. These strengths sometimes allowed Jordan's military to compensate for weaknesses derived from Arab culture that their system was unable to mitigate.

## The Bedouin Role

Jordanian recruits came to the Legion different from most of the recruits of the other Arab armies. During the early years of the Legion, essentially between Glubb's arrival in 1930 and his departure in 1956, the Jordanian armed forces were dominated by Bedouin tribesmen, and not the settled *hadari*. The Bedouin were a sub-culture of the Arab world and therefore their culture was different from the dominant Arab culture. Most Middle East experts aver that the Bedouin sub-culture differed from that of the dominant Arab culture--the culture of the settled populace--in several ways. The Bedouin were considered to be extremely individualistic and egalitarian, showing much less of the emphasis on hierarchy and deference to authority of the dominant society.<sup>5</sup> Indeed, Bedouin tribes (and armies, when they were formed) were far less centralized and hierarchical than the institutions of the settled population.<sup>6</sup> Moreover, the Bedouin still cherished a "warrior" ethos which encouraged personal bravery, loyalty to kin, and tolerance for hardship. While these last three values were also found in the dominant culture (as a result of the powerful influence of the Bedouin way of life on the minds of the settled populations), they were always strongest among the Bedouin.<sup>7</sup>

## The British Influence

The culture of the Jordanian military also bore the heavy stamp of the British army. Jordan's armed forces began as the famed Arab Legion, established by the British during World War I and commanded and officered by the British until 1956. The Arab

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(Ithaca, NY: Cornell University Press, 1996).

<sup>5</sup> Mohamed Awad, "Living Conditions of Nomadic, Semi-Nomadic and Settled Tribal Groups," in Abdulla M. Lutfiyya and Charles W. Churchill eds., *Readings in Arab Middle Eastern Studies and Cultures*, (The Hague: Mouton, 1970), pp. 140-141; Halim Barakat, *The Arab World: Society, Culture, and State*, (Berkeley: University of Ca Press, 1993), pp. 52-53; Morroe Berger, *The Arab World Today*, (NY: Anchor, 1962), p. 46; Dale F. Eickelman, *The Middle East: An Anthropological Approach*, (Englewood Cliffs, NJ: Prentice Hall, 1981), pp. 67-71; Bernard Lewis, *The Arabs in History*, Revised Edition, (NY: Harper, 1966), p. 29; Sania Hamady, *The Temperament and Character of the Arabs*, (NY: Twayne, 1960), pp. 93, 97.

<sup>6</sup> Awad, p. 141; Hamady, pp. 104-106, 199; Lewis, p. 29.

<sup>7</sup> Barakat, pp. 52-53; Berger, pp. 46-49; Arthur R. Day, *East Bank/West Bank*, (NY: Council on Foreign Relations, 1986), p. 81; Hamady, p. 199; Helen Chapin Metz, *Jordan: A Country Study*, (Washington, DC: GPO, 1991), p. 252; Samir Mutawi, *Jordan in the 1967 War*, (Cambridge, UK: Cambridge University Press, 1987), p. 42.

Legion relied wholly on British military tactics, organization, training, and doctrine. Moreover, the British developed a training system specifically designed to take Arabs and socialize them to the culture--the "way of doing things"--of the British Army.<sup>8</sup> Perhaps of greatest importance, the British established their own schools for the Arab Legion. Most of the young men who came to the Legion in the years after World War I had had no formal education whatsoever. In response, the British established their own school system which relied on a British educational method and was largely staffed by British or British-trained teachers. Boys started in these schools at the age of about 10 and when they graduated they were then inducted into the Legion. This system persisted until the early 1950s when Jordan's public education system grew large enough (and enough of the Bedouin had settled) so that there was an adequate pool of educated young men from which to man the Legion.<sup>9</sup>

This pervasive British influence was a major factor contributing to Jordanian military effectiveness. Brigadier S. A. El Edroos, a leading historian of the Jordanian military, remarks that, "a large share of the credit for the high professional standards achieved by the Arab Legion is due to Glubb Pasha and the British officers who served with the Legion."<sup>10</sup> Trevor Dupuy similarly noted that the principal source of Jordanian military effectiveness has been "decades of British leadership and military tradition," and that Jordan's proficiency has declined over the years since the expulsion of the British officers in 1956 and the consequent waning of the influence of British military culture.<sup>11</sup>

As a result of this British influence, the Jordanian military was initially very different from that of other Arab militaries and therefore suffered significantly less from some of the problems of military effectiveness associated with culturally regular Arab behavior. According to a US military officer who has worked with the Jordanians, as well as with several other Arab armies, Jordanian officers' quarters have the feel of British messes, rather than that of a typical Arab *majlis*. Jordanian personnel stress individual military skills, discipline, and the care and maintenance of individual weaponry in a manner totally foreign to most Arab militaries. Jordanian units emphasize the combat skills, discipline, and readiness of individual soldiers that is a hallmark of the British military system. Jordanian training emphasizes the development of its personnel as professional soldiers, and this training is frequent and strenuous. Finally, Jordanian training stresses the objective communication of information, inculcating the notion that the honor of a Jordanian soldier demands accuracy in reporting to his superiors.<sup>12</sup>

### *The Importance of Size and Manning Practices*

The small size, professional character, and long terms of service of the Jordanian military further aided their military effectiveness in a number of ways. Because of its

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<sup>8</sup> See in particular, El Edroos, pp. 30-328

<sup>9</sup> Be'eri, p. 345; Roderic D. Matthews and Matta Akrawi, *Education in Arab Countries of the Near East*, (Washington, DC: American Council on Education, 1949), pp. 299-321; Satloff, p. 63. On the more progressive teaching of the British schools, see Pervez Hoodbhoy, *Islam and Science*, (London: Zed Books, 1991), pp. 39, 125.

<sup>10</sup> El Edroos, p. 279.

<sup>11</sup> Col. Trevor N. Dupuy, *Elusive Victory*, Third Edition--Paperback Edition, (Dubuque, IA: Kendall Hunt, 1992), p. 627. For additional sentiments that the British influence was a critical element of Jordanian military effectiveness, also see El-Edroos, p. 312; General Uzi Narkiss, *The Liberation of Jerusalem: The Battle of 1967*, (London: Valentin Mitchell, 1987), p. 52; Nadav Safran, *From War to War*, (NY: Pegasus, 1969), p. 233; Brigadier Peter Young, *The Israeli Campaign, 1967*, (London: William Kimber, 1967), pp. 50-51.

<sup>12</sup> Author's interviews with US military personnel May 1993. For concurring views, see Anthony Cordesman, *Jordanian Arms and the Middle East Balance*, (Washington, DC: Middle East Institute, 1983); Anthony Cordesman, *After the Storm: The Changing Military Balance in the Middle East*, (Boulder: Westview, 1993), pp. 286-286-300; and El Edroos, esp. 250-281, 311-313, and 414-426.



comparatively small size, and because service in the Jordanian military was considered highly prestigious, Amman was able to rely primarily on volunteers and was able to select the best of the available manpower for service in the military. Consequently, Jordanian soldiers tended to be more motivated and committed to military service, and therefore more willing to endure rigorous discipline and training, than was the case in other Arab armed forces. The small size of the armed forces also allowed Jordan to provide fairly extensive, high quality training for its troops.

However, possibly the most important advantage of Amman's approach was that the small size and professional character of the Jordanian military essentially allowed Jordan to train many Arab cultural traits "out" of its soldiers.<sup>13</sup> The Jordanian military's emphasis on extensive training over long periods of time allowed the military to socialize its recruits to its own culture--the culture of the Jordanian military--which was very different from the culture of the larger Jordanian society because of its heavy British (and Bedouin) influences. Thus the small size and professional character of the Jordanian military was the primary reason the Jordanians were able to maintain many elements of British military culture even after the British officers were dismissed in 1956. It takes a long time to train a person to think and act in a way different from his or her accustomed manner. If Jordan had opted for a large conscript military, it probably would have proven extremely difficult to inculcate the British traditions into so many soldiers and officers serving for brief periods of time. In such a mass army, Arab culture would have quickly reasserted its dominance as British-trained personnel were cycled out of the force and new recruits were brought in. This is precisely what happened in Iraq. Initially after Iraq won its independence from Great Britain, the Iraqi Army too was dominated by a British style. However, as Iraq expanded its military, increased its reliance on conscripts, and shortened the length of service, the British influence quickly faded.<sup>14</sup>

### *Jordanian Military Effectiveness*

Most Israeli officers consider the Jordanians to have been the most formidable of their Arab foes, while Western personnel who have spent time in the Middle East similarly aver that the Jordanians are, on average, the most proficient soldiers in the Arab world.<sup>15</sup> Especially during the 1948 War of Israeli Independence, but also to a lesser extent throughout the rest of the postwar period, Jordanian forces suffered less from problems of military effectiveness common to the other Arab militaries and have demonstrated certain strengths possessed by none of the other Arab states. Tactical commanders of Jordanian units displayed greater initiative, improvisational ability, and independent judgment than any of the other Arab armed forces, especially in 1948. Jordan experienced fewer problems with exaggeration and obfuscation in reporting up the chain of command than other Arab militaries, although this seems to have fallen off quickly beginning in about 1956. Similarly, in 1948, Jordanian forces demonstrated

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<sup>13</sup> The Royal Jordanian Air Force (RJAF) appears to have performed even better than the rest of the Jordanian military, especially in 1970 against Syria, although they were still never on a par with the Israelis or air forces. I suspect that this even higher level of military effectiveness was a product of the "eliteness" of the RJAF. Remember, in 1967 there were only 24 Hawker Hunters and 5 F-104s in the Jordanian inventory while by 1970 his had grown to only 30 Hunters and 20 F-104s. In short, the Jordanian pilot force amounted to no more than a handful of men who were undoubtedly the cream of the crop and then received extensive training in Great Britain and/or the United States.

<sup>14</sup> Another reason for the waning of British influence in the Iraqi Army was a conscious effort to root out what was seen as a colonial legacy. In Jordan, however, the prestige of the Arab Legion, and its critical role in the creation of a Jordanian nation, allowed the military to maintain its British style without serious repercussion. Cordesman, *After the Storm*, pp. 429-433; and Phebe Marr, *The Modern History of Iraq*, (Boulder, Co: Westview, 1985), pp. 95-210.

<sup>15</sup> Author's interviews with US military personnel, May 1993; conversations with Israeli military personnel, 1991-1994; and Dupuy, pp. 626-633.

superb combined arms coordination, a willingness to decentralize authority to commanders on the spot, and an ability to quickly and efficiently conduct unplanned combat operations. Jordanian soldiers were well-disciplined and consistently displayed superb marksmanship with their individual weapons, although they generally fared less well with large crew-served weapons such as tanks and artillery pieces. Although all Arab armies generally showed strong patterns of personal bravery and good unit cohesion, the Jordanians still stood out in these categories. As noted above, Jordanian pilots also were far more skillful in air-to-air combat, displaying an ability to maneuver against their foes and to adjust to unforeseen circumstances almost unheard of in the other Arab air forces. Similarly, Jordanian air strikes were considerably more effective than those of any other Arab air force.

One can see in these differing patterns of military effectiveness the influence of the unique elements of Jordanian military culture. The more individualistic and egalitarian traditions of the Bedouin, as well as their dislike for strict, centralized authority appear to have made Bedouin personnel more willing to take the initiative and to react to battlefield developments on their own judgment. The fact that they were less likely to defer decision-making to higher authority probably meant that junior officers of Bedouin origin were more willing to take advantage of opportunities presented by the vicissitudes of combat--such as at Kfar Etzioni and Latrun in 1948, where Bedouin junior officers seized upon sudden opportunities to secure two of Jordan's most important achievements of the war. Their traditions of egalitarianism and decentralized authority almost certainly made Bedouin commanders more willing to give their subordinates free rein. Also, the "warrior" ethos of the Bedouin undoubtedly contributed to the levels of personal bravery and unit cohesion among Jordanian forces which were high even by Arab standards.<sup>16</sup>

Likewise, it is clear that many of the areas of military effectiveness in which the Jordanians outperformed the other Arab states were derived from the tenets instilled by the British. The fact that the majority of Jordanian units were commanded by British officers, or by Jordanian officers directly trained by the British was another important reason that Jordanian tactical forces showed considerable aggressiveness, flexibility, innovativeness, and use of tactical maneuver in 1948. The individual soldiering skills of Jordanian personnel was head and shoulders above that of any of the other Arab states, especially in the 1940s and 1950s. This can be seen in the remarkable degree of discipline and marksmanship displayed by Jordanian soldiers in 1948 and 1956, and to a lesser extent in 1966 and 1967. Similarly, the greater unit cohesion of Jordanian forces probably also owes at least something to the loyalty and pride in the unit that was a central feature of the British tradition. Indeed, the Jordanian military experienced far fewer problems with officer-enlisted relations, which probably also can be attributed at least in part to the devotion to duty and loyalty of the British officer credo. Finally, the Jordanians had considerably less difficulty with obfuscation and deception as well as attention to maintenance throughout the 1940s and 1950s.

Perhaps the strongest proof of the relationship of these patterns of better military effectiveness to British and Bedouin cultural patterns can be found in the slow erosion of these same skills in the 1950s and 1960s after the Jordanians expelled the British and began to accept greater and greater numbers of *hadari*.<sup>17</sup> Almost immediately after the

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<sup>16</sup> It is also worth noting that the only other Arab military force of the postwar era with a high percentage of Bedouin--the Saudi Arabian National Guard (SANG)--also manifested somewhat better military effectiveness than most of the other elements of the Saudi military. In particular, during the Gulf War, US personnel remarked that the SANG was far more aggressive and able to adapt to change than was the Royal Saudi Land Forces.

<sup>17</sup> the reader will recall that in 1948 the Jordanian military was almost entirely Bedouin, but by 1970 *hadari* comprised almost a third of the Legion, and nearly all of its technical arms. Most of this change occurred during the 1960s and 1970s when the Jordanians recognized that they had to modernize their military. The

loss of their British officers, Jordanian forces at Qalqilyah in the fall of 1956 displayed considerably more rigidity and passivity than ever before. In 1966, 1967, 1970, and 1973, Jordanian tactical commanders showed even less initiative, creativity, and independence of action. Similarly, in 1967 and 1970, Jordan encountered tremendous difficulties with distorted reporting from the lower echelons of the chain of command, overcentralization of command, and a dearth of tactical maneuver. Moreover, unit cohesion did not appear to have been quite so strong as it once had been, although individual soldiering skills remained good. In later battles, many of these same problems grew increasingly more pronounced. Nevertheless, Jordanian performance in all of these areas remained somewhat better than those of most of the Arab armies, in part because of the continuing ties between Jordan and Britain--and later with the US--and in part because the small size and devotion to professionalism in the Jordanian armed forces helped preserve many of the British traditions long after the British were gone.

### **Conclusions from the Jordanian Case**

The Jordanian army was able to achieve better military effectiveness than the norm for the Arab world between 1945 and 1991 because it developed a military culture that differed from that of the dominant Arab culture. In this case, their greater proficiency was derived from the absence of some of the traits of the dominant culture that hindered military effectiveness, and by the presence of other traits not present in the dominant Arab culture that aided military effectiveness. The Arab Legion also was able to retain those traits of the dominant Arab culture that aided military effectiveness.

Jordanian soldiers and officers mostly came to the Arab Legion with a subtly different set of cultural values, and then were exposed to an even more different culture for long periods of time. Because of this lengthy contact with the unique Jordanian military culture, as well as the small size and the practice of relying on volunteers, allowed the Jordanians to maintain their unique military culture for some time. As long as the Jordanian military culture espoused values and behavioral patterns different from that of the larger society they fought very differently from Arab armies that more closely reflected the dominant Arab culture. Moreover, to the extent that their military cultures espoused traits beneficial in modern military operations--such as a initiative and decentralized command--their performance in combat benefited to a corresponding degree.

This evidence again strongly supports the Arab-culture theory. As the theory predicts, Jordan's different military culture produced patterns of military effectiveness different from those of the other Arab states. Moreover, as Jordanian military culture began to lose this uniqueness after the expulsion of the British and the dilution of Bedouin manning levels (and the settlement of the Bedouin tribes, which has resulted in their culture increasingly resembling that of the dominant Arab culture), Jordanian military effectiveness began to resemble that of the other Arab armies. One point to note is that the British influence does appear to have been the more important of the two. This can be seen in the fact that Jordanian officers were still largely of Bedouin origin in 1967-1973, yet their performance was considerably worse than in 1948-1956. This indicates that it was the loss of the British officers and their training methods, much more than the influx of hadari, that was the primary source of the very different patterns of tactical leadership prevalent in the early days of the Arab Legion.

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Bedouin had little technical skills (and much disdain for technical work) and therefore the regime had to increasingly induct the more urbanized and technically-proficient Palestinians into the armed forces. See Eliezer Be'eri, *Army Officers in Arab Politics and Society*, (NY: Praeger, 1970), p. 345; Day, pp. 79-81; Brigadier Syed Ali El-Edroos, *The Hashemite Arab Army, 1908-1979*, (Amman, Jordan: The Publishing Committee, 1980), pp. 281, 330; Metz, pp. 240, 252; Edgar O'Ballance, *Arab Guerrilla Power*, (Hamden, CT: Archon Books, 1973), pp. 144-145; Robert B. Satloff, *Troubles on the East Bank*, (NY: Praeger, 1986), p. 63.

### **Explaining Other Instances of Exceptionally Good Arab Military Effectiveness**

In general, the Arab-culture theory predicts that Arab militaries will perform poorly in battle. The theory does suggest that Arab militaries ought to perform some military operations--such as static defenses and set-piece offensives--better than others. However, the various problems that aspects of the dominant Arab culture create for tactical leadership, information management, and technical abilities should be expected to undermine Arab operations even in this narrow range of operations. Consequently, any instance in which an Arab military demonstrated even modest degrees of military proficiency could be seen as contradicting the broad predictions of the Arab-culture theory. Moreover, any instance in which an Arab military, or part of an Arab military, displayed any ability (or just failed to show the usual problems associated with Arab militaries) in tactical leadership, information management, or technical skills, also might be taken as evidence contrary to the Arab-culture theory.

The first part of this chapter addressed three such instances of Arab militaries that performed measurably better than the norm for the postwar period. The Egyptians in 1973, the Iraqis after 1986, and the Jordanians at least until 1956--and to some extent right up to the present--all enjoyed abnormal success in battle. The discussion above demonstrated that the reason for this success was that the effects of Arab culture on these armed forces had been mitigated, resulting in a higher level of military effectiveness. Thus, far from undermining the Arab-culture theory, these cases were exceptions that proved the rule.

In Chapter 11, I noted at least six other cases of Arab military forces that performed better than the norm for Arab armed forces in the postwar period. Syria's commandos after 1973, the Iraqi Republican Guard after 1986, Iraqi Mirage F-1 pilots after 1983, Saudi F-15 pilots, the Jordanian Air Force, and the Syrian military in 1948 all displayed a higher degree of effectiveness in battle than most Arab military forces. Unfortunately, there is very little evidence to indicate the causes of these instances of exceptional performance. However, I believe that, like the three cases discussed in the first part of this chapter, all six of these cases were the result of circumstances in which the influence of Arab culture was mitigated, thereby leading to superior military effectiveness than was usual among Arab armed forces.

In the next section of this chapter I lay out arguments as to why each of these cases can best be explained by a reduction in the effects of the dominant Arab culture on the soldiers and officers in these forces. I believe that in two of these anomalous cases, the Saudi F-15 pilots and the Syrian military in 1948, the effects of the dominant Arab culture were mitigated because these forces had distinctive military cultures. Therefore, like the Jordanian Arab Legion, these units did not display the same patterns of military effectiveness because their personnel had subtly different values and behavioral patterns from those of other Arabs. The other four cases--the Syrian commandos, the Iraqi Republican Guards and Mirage F-1 pilots, and the Jordanian Air Force--were all elite forces. I contend that all elite units have roughly comparable selection criteria and training objectives, that this process selects personnel who do not fit the profile of the culturally-regular Arab, and that the training for elite units further inculcates values and behavioral patterns into their personnel that are not typical of the dominant Arab culture. In short, elite Arab units recruit personnel who are not culturally-regular and then train them to be even less culturally-regular.

#### **Exceptional Cases Resulting from a Distinctive Military Culture**

As discussed in reference to the Jordanian military above, one way to mitigate the effects of a society's culture on the military effectiveness of its armed forces is to create a

military sub-culture distinct from that of the larger society. By creating a training system that instills values and behavioral patterns different from that of the dominant culture, a military can teach its personnel to think and act in a manner different from the manner they brought with them to military service. Although this is difficult, it is far from impossible. To the extent the armed forces can establish secondary schools (and even primary schools) in which future military recruits, especially officers, can be educated this task is made even easier because the educational method there can be consciously shaped to teach the values promoted by the military. Alternatively, an armed service may simply attract or purposely recruit from a segment of its society with a very distinct sub-culture. In these instances as well, one would expect the culture of the military to more closely reflect that of the sub-culture rather than that of the dominant culture.

The Jordanians are the perfect example of this phenomenon because they employed both methods. First, Jordanian military personnel were recruited mostly from the Bedouin tribes, with the result that the culture of the Arab Legion more closely reflected that of the Bedouin sub-culture than the dominant Arab culture. Second, they took these personnel and educated them in British-style schools and trained them according to British military traditions, instilling in them British military values and behavior. Although the available evidence is skimpy, I believe that the Syrian military of 1948 performed somewhat better than the norm because they had been exposed to the latter method, while the Saudi Arabia's F-15 pilots fell into the former category.

#### *The Syrian Military, 1948*

The Syrian military performed above average in a number of categories of military effectiveness during the 1948 War of Israeli Independence. Many Syrian commanders, mostly senior officers, demonstrated an excellent grasp of combined arms operations and the use of maneuver. Syrian commanders were reasonably flexible, they reacted quickly and at times creatively to Israeli moves, and they mostly tried to take advantage of opportunities as they appeared. In addition, Syrian pilots conducted highly-effective airstrikes against Israeli ground forces. This is not to suggest that the Syrians fielded a highly competent army, or even that they were the equals of Jordan's Arab Legion, but they clearly did better than most Arab militaries of the postwar period, and in categories of military operations that traditionally had proven the most problematic for Arab militaries.

The reason for this anomalous performance seems to be rooted in the impact of French colonialism on Syria and a lingering French influence in the Syrian military. The Syrian Army in 1948 still retained much of the shape it had acquired during its imperial tutelage. The Syrian Army still employed French doctrine and French equipment. Moreover, most of the Syrian officer corps had been trained by the French, and a fair number had even participated in training programs in France. Indeed, the French took a much more serious interest in the training of the Syrian military than the British had with the Egyptian and Iraqi militaries, although they were not nearly so devoted as the British were to the training of the Arab Legion.

Aside from the impact of French training, it is also possible that Syrian officers were exposed to French culture in their schools. The French set up a large number of schools in Syria. A smaller number of American schools were also established in Syria during this period. While the majority of Syrian school-children attended public or Quranic schools between the two world wars, a considerable minority attended the French and American schools. Attendance at foreign schools in Syria was far higher than in any other Arab state. For instance, during the school year 1944-1945 nearly 15 percent of Syrian schoolchildren attended foreign schools compared to less than five percent of Egyptian schoolchildren and barely one percent of Iraqi schoolchildren.<sup>18</sup> The

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<sup>18</sup> Compare the various figures presented in Matthews and Akrawi, pp. 34, 140, 210, 306, 351. Some of the French schools in Syria were run by the Jesuits, whose teaching methods were not always so

curriculum employed in most of the French schools reflected Western educational practices.<sup>19</sup> For example, the educational experts Roderic Matthews and Matta Akrawi noted that French educational methods in their Syrian schools were designed to inspire "independence of spirit," and a "spirit of critical insight," and taught that there was no single "right" way of doing things but that all points of view had to be considered.<sup>20</sup> They also observed that the American schools were even more "progressive," i.e. Western, in their teaching methods.<sup>21</sup>

It may be that considerable numbers of the Syrian officer corps were educated in these schools. Although there is no hard evidence to support or contradict this supposition, there are at least two deductive arguments that support it. First, to the extent that the officers who led the Syrian army in 1948 were chosen by the French before the end of their mandate in 1945, it seems likely that the French would have promoted Syrians who had attended these French (and American) schools as boys and thus assimilated some Western ways of thinking. The French officers almost certainly would have favored those Syrians who spoke French and understood the French approach to military operations--or to life more generally--because they had been educated in French schools. Second, even if the senior command positions in the Syrian armed forces in 1948 were determined not by the French, but by the oligarchy that ruled in the brief period between the end of World War II and the start of the War of Israeli Independence, it would also seem likely that a considerable number of the officers so chosen would have been educated in the foreign schools.<sup>22</sup> The oligarchs were drawn entirely from Syria's upper classes and undoubtedly would have chosen senior commanders from among their milieu. Thus, in this case as well, the senior officers would likely have been drawn from among Syria's upper-middle and upper classes, large numbers of whom attended the French and American schools. Consequently, whether the officers who led the Syrian army in 1948 were promoted to their positions under the French or under the postwar Syrian oligarchy, it seems likely that many of them were educated in Western schools.

The fact that Syrian officers were trained by French military personnel in a military system modeled on the French armed forces and that some, perhaps many, of the senior commanders of the Syrian Army of 1948 may have been educated in Western schools suggests that the Syrian officer corps may have had a subtly different cognitive and behavioral pattern than other Arab officer corps. It is analogous to the Jordanian officers educated in British schools and then trained by British military officers. In short, it suggests that Syrian military culture may have had a strong Western influence and therefore was subtly different from the dominant Arab culture. If this explanation were accurate, Syria's somewhat better military effectiveness in 1948 would conform closely to the predictions of the Arab culture theory.

Moreover, after the wave of military coups that swept across Syria in the late 1940s, 1950s, and 1960s--and the purges that followed each of them--few Syrian officers were left who could claim to have been educated in the Western manner. Moreover, nationalist sentiments prompted the closing of many of the foreign schools and the Syrian Army threw off its French traditions almost completely.<sup>23</sup> These events would have wiped out any distinctive Syrian military culture and replaced it with a military culture identical to the dominant Arab culture. Indeed, as predicted by the theory, when Damascus next went to war nearly twenty years later in 1967, Syrian military performance was much worse than it had been in 1948.

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progressive as those of the majority of French and American schools.

<sup>19</sup> Matthews and Akrawi, pp. 463-464, 564-565.

<sup>20</sup> Matthews and Akrawi, p. 470.

<sup>21</sup> Matthews and Akrawi, p. 470.

<sup>22</sup> Derek Hopwood, *Syria, 1945-1986: Politics and Society*, (London: Unwin Hyman, 1988), pp. 31-33.

<sup>23</sup> Szyliowicz, p. 199.

### *Saudi F-15 Pilots, 1990-1991*

Another Arab military force that performed better than the norm was the Royal Saudi Air Force (RSAF), and especially its F-15 pilots, during the Gulf War. RSAF F-15 pilots were considered capable dog-fighters even by US standards. During the Gulf War and before, American and other Western pilots who trained and flew with the Saudis uniformly expressed high opinions of the individual pilot skills of Saudi F-15 squadrons. Saudi pilots have only engaged hostile aircraft on two occasions since 1980, but on those encounters they shot down at least 3 of 4 enemy aircraft (and possibly all four) without losing any of their own.

The RSAF F-15 pilots were the true elite of the Saudi armed forces. A *great* many were members of the Royal family, while the others had similarly important political connections. One did not get to be an F-15 pilot in the RSAF simply by being a good pilot: one had to be a good pilot *with connections*. This status implies that these men were accustomed to being in positions of authority (and all this entails in Arab patriarchies), and therefore, probably were accustomed to taking initiative, making decisions, and acting creatively. As partial confirmation of this, US pilots reported that Saudi F-15 pilots were extremely independent-minded, and did not easily accept the criticism or orders of their superiors. In addition, Saudi F-15 pilots trained frequently with US forces and many had been to school and to military training programs in the United States.<sup>24</sup> This extended exposure to a wholly different culture, especially for those who trained in the US, may likewise have contributed to the exceptional performance of Saudi F-15 pilots. Finally, the RSAF F-15 squadrons were an elite force and almost certainly benefited from the inherent strengths of all elite forces in terms of specialized selection criteria and training.

Thus the Saudi F-15 pilots came to the RSAF different from most Saudi men. They were raised and taught to behave in a wholly different manner. Then, once they got to the military they were exposed to yet another culture--that of the United States Air Force--which provided their training. As a result, Saudi F-15 pilots can hardly be considered "culturally-regular," and may be about as atypical as imaginable for Arab men. Thus, in this case as well, the evidence seems reasonably strong that Saudi F-15 squadrons had a sub-culture distinct from that of the dominant Arab culture, with the result that they did not suffer from the same problems in air-to-air combat associated with certain aspects of the dominant Arab culture.

### **Exceptional Cases Resulting from a Reliance on Elite Forces**

Another way that Arab armed forces were able to achieve better military effectiveness than the norm during the period 1945-1991 was by creating elite forces which then assumed the lion's share of combat responsibilities. I consider elite forces to be bodies of picked men, provided with specialized training. A number of Arab militaries enjoyed superior military effectiveness because of their reliance on elite formations. Beginning with the 1973 October War, Syria increasingly leaned on an ever-expanding corps of commandos to serve as the spearhead of its offensives and the backbone of its defenses. Similarly, after the humiliating defeat at al-Faw in 1986, Iraq expanded and augmented its Republican Guard to serve as the primary counterattack force and offensive arm of the Iraqi military. In addition, Iraqi Mirage F-1 pilots during the Iran-Iraq War and Jordanian pilots in the late 1960s and early 1970s, both achieved a higher level of proficiency than other Arab air forces. In these cases as well, the primary reason for this exceptional performance was that they were essentially elite forces.

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<sup>24</sup> Cordesman, *The Gulf and the West*, pp. 203, 216-232; Dunnigan and Bay, p. 58; Gordon and Trainor, p. 265; and author's interviews with US military personnel, April-July 1991.

### *Syrian Commandos*

After the October War, Damascus decided that its infantry formations were useless and decided to take the most capable fighters from these units and place them in an expanded commando corps while the rest were demobilized or converted to mechanized infantry. The Syrian commandos had fought well in 1973, especially in capturing Mt. Hermon and holding it against several Israeli counterattacks before finally being evicted by a major Israeli assault. The commandos were formed and trained to perform special forces-type operations such as raids, aerial envelopments, and attacks against heavily-defended critical targets. Eventually, the Syrians created as many as 33 battalions of commandos. Although 33 battalions sounds like a lot, this is not really the case. Syrian commando battalions comprised only 200-300 men. There were 9-10 brigade headquarters to command these battalions, but there were no divisional commands, and the brigade commands were very light, having few of the support assets such as artillery, engineers, etc., that are normally attached to maneuver brigades.<sup>25</sup> Consequently, even as late as 1982 the entire Syrian commando force probably amounted to no more than about 10-15,000 men.<sup>26</sup>

The commando battalions soon became the main combat force of the Syrian army. In 1976, Syrian commando units spearheaded nearly all of the major operations during the Syrian invasion of Lebanon. In 1982, the Syrians attached commando battalions to all of their large armored and mechanized formations in Lebanon. In addition, small units of Syrian commandos--with attached armor, artillery and engineers--were used to harass and block the Israeli advances through the Lebanese mountains. In all of these battles, the Syrian commandos performed very well. They were hardly invincible and still manifested many of the same problems of the rest of the Syrian army, but they fought far more effectively than the rest of the military. In particular, Syrian commandos showed considerably better combined arms integration and unit cohesion, as well as somewhat greater aggressiveness, creativity, weapons-handling skills, and flexibility, than Syrian line formations in Lebanon.

### *The Iraqi Republican Guard, 1986-1991*

In the midst of the Iran-Iraq War, the Iraqi General Staff concluded that their tactical forces were extremely mediocre and they had to do something to create a force capable of decisively defeating the poorly-armed and trained Iranians. Their solution was to massively expand the regime's Praetorian guard, the Republican Guard. The Guard was increased from 3 or 4 brigades to 28 brigades between 1986 and 1987. Six division commands were established (later expanded to eight, and eventually twelve--with 36-40 brigades), the Guard was made a corps-level formation called the Republican Guard Forces Command (RGFC) with roughly 120,000 men.<sup>27</sup> The Guard was expanded in much the same way the Syrian commandos were expanded, by transferring the most competent soldiers and officers from the regular army to the RGFC. However, unlike the

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<sup>25</sup> Anthony Cordesman, *The Arab-Israeli Military Balance and the Art of Operations*, (Lanham, MD: University Press, 1987), pp. 118-119; Michael Eisenstadt, *Arming for Peace? Syria's Elusive Quest for "Strategic Parity,"* (Washington, DC: Washington Institute for Near East Policy, 1992), pp. 29, Richard Gabriel, *Operation Peace for Galilee*, (NY: Hill and Wang, 1984), p. 119; J. M. Moreaux, "The Syrian Army," *Defence Update*, No. 79, March 1986, pp. 26, 30; Mark Urban, "Fire in the Galilee, Part 2: Syria," *Armed Forces*, Vol. 5, May 1986, p. 209.

<sup>26</sup> Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War: Volume I, The Arab-Israeli Conflicts, 1973-1989*, (Boulder: Westview, 1990), pp. 109, 118, 277-278; Cordesman, *The Arab-Israeli Military Balance*, p. 45; Eisenstadt, pp. 24-25, 28, 98-99.

<sup>27</sup> Cordesman and Wagner, *The Iran-Iraq War*, pp. 359-360, 363, 389; Lawrence Freedman and Efraim Karsh, *The Gulf Conflict, 1990-1991*, (Princeton, NJ: Princeton University Press, 1993), p. 55; Dilip Hiro, *The Longest War: The Iran-Iraq Military Conflict*, (NY: Routledge, 1991), p.195; US News and World Report, *Triumph Without Victory*, (NY: Times Books, 1992), p. 12.



Syrian commandos, the RGFC generally was not trained or assigned special-forces type operations. One division of the Republican Guard was a Special Forces division with three brigades that were trained and employed for special forces operations such as the heliborne assault on Kuwait International Airport on 2 August 1990. However, the rest of the RGFC were employed as the primary counterattack force for Iraqi defensive operations, such as at the Second Battle of al-Basrah in 1987 and, beginning in April 1988, the Guard was used as the principal offensive arm of the Iraqi ground forces. In the five offensives against Iran in the spring and summer of 1988, the Republican Guard played the primary role, operating in conjunction with whichever regular Army corps was manning the sector in which the offensive was conducted.

In all of these battles, the RGFC displayed somewhat better combat effectiveness than the rest of the Iraqi armed forces. In particular, Republican Guard units displayed considerably stronger unit cohesion and weapons-handling, as well as slightly more aggressiveness than their regular army counterparts. However, not only were the Guards not the equivalent of Hitler's *Waffen SS* or the *Gross Deutschland* Division, they were not even the equivalent of the Syrian commandos. The RGFC prevailed over the Iranians and the Kuwaitis largely because of their overwhelming advantages in manpower and firepower (including chemical warfare against Iran), and their ability to execute highly competent set-piece operations drawn up by the Iraqi General Staff. Iraq's Republican Guards were far worse than Syria's commandos in their ability to conduct combined arms operations (when not scripted by the General Staff), their ability to set-up effective ambushes and then retreat under fire to fall-back positions, and in the willingness or RGFC junior officers to take initiative and exploit fleeting battlefield opportunities.

#### *The Royal Jordanian Air Force, 1966-1970*

In the limited number of combat operations in which it participated, the Royal Jordanian Air Force (RJAF) performed noticeably better than the norm for Arab air forces. Although Jordanian air-to-air combat experience was rather limited, on every occasion the Israelis remarked that the Jordanians were considerably more skillful than their Iraqi, Egyptian, and Syrian compatriots. Jordanian pilots showed an ability for independent action, aerial maneuver, and quick reactions that were totally alien to most other Arab fighter pilots. Of course in all of these dogfights the Jordanians still were defeated and did little or no damage to the Israelis.

Similarly, by all standards, the RJAF performed adequately in attacking Syrian armor in September 1970. While this may not sound like great praise, it is one of the only occasions when Arab airstrikes had *any* impact on enemy ground formations. The Jordanian pilots conducted an impressive number of sorties and destroyed a fair number of Syrian armored vehicles given the number of aircraft they had available. While there were a few other factors working in their favor--the short distance to the battlefield, the absence of the Syrian air force, the dearth of ground-based Syrian air defenses--these cannot fully explain away the creditable performance turned in by the RJAF.

In the case of both air-to-air and air-to-ground operations, Jordanian prowess almost certainly is a product of the small size and extremely high standards of Jordanian combat pilots. In effect, Jordan's fighter pilots were an elite force. Amman maintained very high standards for its pilots in part because the King had a special affection for his fighter force, but mostly because the RJAF was minuscule and therefore had to rely on pilot quality to compensate for quantity. Moreover, because the air force was so small, the RJAF was able to pick only the cream of the crop for its combat pilots. In other words, the Jordanian pilots were an exceptional group, chosen specifically because they had abilities that far exceeded those of most of the population. Finally, it should be remembered that the Jordanians were good, but were still never able to beat the Israelis, even when they had a significant numerical advantage.

### *Iraqi Mirage F-1 Pilots, 1983-1988*

The performance of Iraq's Mirage F-1 pilots in attacks on tankers in the Persian Gulf and economic facilities (mostly oil-related) in Iran during the Iran-Iraq war also was notably better than most Arab air-to-ground campaigns. Using precision-guided munitions (PGMs) like the Exocet anti-ship missile and the AS-30L laser-guided bomb, Iraqi Mirage pilots were able to hit a significant number of tankers hauling Iranian oil and were able to destroy or damage key elements of Iran's oil export infrastructure. Nevertheless, the Iraqi campaign still left much to be desired. In particular, the Iraqis never sustained their airstrikes to the extent needed to cause lasting damage to any aspect of Iran's oil industry.

To a certain extent, the same explanation can be given for the Iraqi Mirage pilots as for the Jordanian pilots: they were a small, elite force. Iraq's Mirage pilots were the very best pilots in Baghdad's air force and had to meet *French* standards, with the result that the vast majority were washed out of the program and only the *crème de la crème* of the Iraqi pilot corps made it through. However, of equal importance was the impact of the PGMs. The PGMs made Iraqi airstrikes vastly more effective than otherwise was the case. Iraqi Mirage pilots still employed sloppy procedures and simplistic tactics--witness the unsophisticated method of Iraqi ship-attack missions making the "Farsi Hook"--but their PGMs compensated for most of their mistakes and allowed them to hit their targets. Indeed, the other problems of Iraqi air force operations--their inattention to reconnaissance, their awful planning, the rigidity with which even Iraqi Mirage pilots stuck to their assigned missions and flight plans, etc., all indicate that the PGMs were a major component of Iraq's success in this category of military effectiveness.

### *Why "Eliteness" May Have Mitigated the Influence of Arab Culture*

Not all elite military units are identical. However, most have certain important features in common. Members of elite units are selected for their combat skills, they also invariably have higher morale and higher unit cohesion because of the *esprit de corps* of all elite formations. In addition, pilots require special skills possessed by only a small percentage of any population, thus in small air forces, only those individuals with the greatest quantity of these rare attributes can be selected. The stringent selection criteria and training typical of many air forces often make them *de facto* elite forces.<sup>28</sup> For these reasons alone, it should have been no surprise that elite Arab units (and air force's small enough and selective enough to be considered elite forces) would perform more effectively in battle than line units.

In addition, there are also certain aspects of "eliteness" that probably served to mitigate the specific effects of Arab culture on military effectiveness. First, elite units are "picked" bodies, meaning that their members are specially selected for their outstanding martial skills. Although there is little unclassified information regarding the selection criteria used for elite Arab units, it is reasonable to assume that they were similar to those employed for elite forces elsewhere. Based on this assumption, the criteria for assignment to Arab elite units almost certainly included aggressiveness and creativity in combat, as well as other traits such as personal bravery and weapons-handling skills. These assumptions are supported by the, admittedly thin, evidence available regarding selection criteria for the Iraqi Republican Guard.<sup>29</sup> Elite ground units intended for special forces-type missions require the ability to operate independently in very small formations. Therefore, for these kinds of forces--such as the Syrian commandos and the

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<sup>28</sup> Of course not all air forces are elite forces. First, some air forces have remarkably low criteria for pilot skills. Second, in some air forces, pilot skills may not be the primary selection criteria. For instance, in highly politicized militaries, loyalty to the regime may be a much more important criterion than pilot skills.

<sup>29</sup> See for example, Richard Jupa and James Dingeman, "The Republican Guards: Loyal, Aggressive, Able," *Army*, March 1991, pp. 54, 60-62; Brig. General Robert H. Scales, Jr., *Certain Victory*, (Washington, DC: Office of the Chief of Staff, US Army, 1993), pp. 113-114.

Special Forces division of the Iraqi Republican Guard--individual initiative, improvisational ability and other traits needed for independent operations also were probably important criteria for selection of personnel. Finally, Jordanian pilots--trained largely by British and American instructors--and Iraqi pilots trained by the French, were probably selected specifically for their ability to act independently and react quickly.

These various selection criteria suggest that the members of elite Arab units were not "culturally-regular." They were probably selected specifically because they possessed traits that were not encouraged (some would argue that they were actively denigrated) by the dominant Arab culture and thus were not strongly manifested in most Arab soldiers and officers. This was probably most true for smaller, special-forces type units like the Syrian commandos, whose special-forces missions almost certainly narrowed the pool of qualified personnel to a very small percentage of the population. Thus these men seem to have come to the military different from their peers.

They were then put together in the same unit, and may also have received different training, which likely would have sharpened the differences between their behavioral patterns and those of the rest of the military. Elite units frequently receive different, more rigorous and more demanding training than line units. In particular, it is common for elite units to receive training that would allow them to operate in small, independent groups. Such training invariably emphasizes aggressiveness, creativity and an ability to act independent of higher authority. Any special forces-type training these personnel received almost certainly would have further encouraged these traits because independent missions by small, self-contained units is the hallmark of special operations. In short, it is reasonable to believe that the training of Arab elite forces also would have been quite different from the training received by other personnel slated to join combat formations with no special need for the capability for independent action. Similarly, the Western training of Jordanian and Iraqi Mirage pilots almost certainly encouraged independent action, aggressiveness and improvisation as integral elements of good piloting because this was the hallmark of Western air force tactics.

Finally, we cannot rule out that foreign influences did not play a greater role in the training of Arab elite units and that this foreign influence subtly reshaped the ideals of Arab elite military personnel. It was fairly normal for Arab elite forces to receive far more training and attention from foreign military advisers than normal line units during the postwar era. Because elite units normally constituted only a small segment of the military, the influence of a handful of foreign advisers could have a disproportionate influence. Moreover, because elite units were expected to play important roles (such as regime security or commando raids) most Arab regimes felt a need to ensure that their elite forces had the highest proficiency. As a result, they usually were lavished with attention from great-power military advisers. Likewise, Jordanian pilots received extensive training and other contact with British and American advisers, just as the Iraqi Mirage pilots were trained by the French (and Saudi F-15 pilots were trained by Americans).

As a final note, the size of an elite Arab force relative to the size of the general population almost certainly was an important determinant of just how much better the elite force was than the regular, line formations. Because a relative minority of people in Arab populations are likely to manifest *strong* traits of independent initiative, creativity, etc., the smaller the elite force relative to the population the more likely it can be filled with individuals who strongly manifest these traits. In other words, the smaller the elite force the more likely that Arab commanders will be able to fill it with the culturally non-regular personnel needed to make it an effective force. On the other hand, the larger the force, the harder it will be to find culturally non-regular personnel to man its ranks and therefore the more likely it will reflect the culturally-normal behavior patterns. Thus, the larger an elite force, the less likely it will perform better than other formations and the smaller an elite force the more likely it will perform better than other formations.

These patterns are clearly illustrated by a comparison of the Syrian commandos and Iraqi Republican Guards. Syria's commandos accounted for about 5 percent of total military manpower and 0.13 percent of Syria's population, whereas the RGFC accounted for about 12 percent of total Iraqi military manpower and about 0.67 percent of Iraq's population.<sup>30</sup> The smaller size of the Syrian commandos relative to the size of the Syrian armed forces and to the general Syrian population compared to the greater size of the Iraqi RGFC relative to the size of its military and population suggest that the Syrian commandos should have been more effective on a unit-by-unit basis. The special-forces mission of the Syrian commandos--implying even less culturally-regular selection criteria and training--also suggests that the Syrian commandos should have been more effective in battle than the RGFC. In fact, they were: the Syrian commandos demonstrated considerably greater skills in battle than their Iraqi counterparts.<sup>31</sup> The Syrian commandos were small enough relative to the overall manpower pool to be able to select very culturally "non-regular" personnel, resulting in their "abnormally" good performance. On the other hand, the Iraqi RGFC was so large that its "eliteness" was really only a matter of degree. It was so large relative to its potential manpower pool that it could not be as selective in choosing personnel as the Syrian commandos. As a result, the RGFC was better than the units of the Iraqi regular Army, but was not as good as the Syrian commandos, nor was the difference between the Iraqi RGFC and Iraqi line formations as great as that between the Syrian commandos and Syrian line units.

#### *Conclusions on Arab Elite Forces*

It is clear that many of the exceptional instances of Arab military forces performing somewhat better than the norm can be traced to the "eliteness" of the forces in question. I believe the arguments I offer above are plausible explanations as to why eliteness may have mitigated the effects of culture and thereby resulted in superior military effectiveness. However, very little proof is available either to support or to contradict these suppositions. Ultimately, however, it may be that the qualities of "eliteness"--the innate superiority of the troops and officers, the esprit of the units, the better training and weapons--may simply have compensated for cultural problems, rather than actually mitigating them.

#### **Conclusions Regarding the Other Cases of Exceptional Arab Military Effectiveness**

In all six cases discussed above, Arab forces exhibited somewhat better military effectiveness than was the norm for Arab armies and air forces between 1945 and 1991. For each of these cases I have made what I believe to be a reasonable case that this exceptional performance was the result of some mitigation of the influence of culture on these units. Unfortunately, I can offer very little evidence in support of my contentions, only plausible supposition. Consequently, it may be that in one or more of these cases, my reasoning is wrong and some other cause was responsible for this exceptional performance. If that were true, these cases would contradict the Arab-culture theory.

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<sup>30</sup> In 1982, the Syrian Army consisted of approximately 250,000 men, thus the commandos accounted for no more than 4-6 percent of total military manpower. In addition, Syria's total population was 11 million in 1982, thus the commandos accounted for .13 percent of Syria's population. Cordesman and Wagner, pp. 109, 118, 277-278; Cordesman, *The Arab-Israeli Military Balance*, p. 45; Eisenstadt, pp. 24-25, 28, 98-99. In 1988, the Iraqi armed forces comprised approximately 1 million men out of a total population of 18 million. Thus the RGFC accounted for about 12 percent of total military manpower and about .67 percent of the total population. Cordesman and Wagner, *The Iran-Iraq War*, pp. 359-360, 363, 389; Freedman and Karsh, p. 55; Hiro, p.195; US News and World Report, p. 12.

<sup>31</sup> For this comparison, the reader should note that the issue is military effectiveness, not victory or defeat. The Syrian commandos lost to the Israelis in 1982 but displayed much better military effectiveness than the Iraqi RGFC did in defeating the Iranians in 1988 and overrunning Kuwait in 1990.

Even if all six cases were found to contradict the Arab culture theory, however, this would not necessarily discredit the theory. First, these exceptions are very modest: in every case the better performance of the units in question were simply a matter of degree and none came close to the competence of Western or Israeli military units. Second, even six exceptions to a rule encompassing 46 years of the military history of five nations who collectively participated in nearly thirty campaigns is negligible. Especially given the size of some of the forces involved (there were probably no more than a few hundred Jordanian Air Force and Saudi F-15 pilots during this period of time), these six exceptions are hardly damning evidence.

However, there is another argument that can be made regarding these cases in favor of the Arab-culture theory: none of the competing theories can explain these exceptions. The underdevelopment theory predicts that all Arab air forces should perform poorly and makes no predictions regarding the performance of Arab elite forces.<sup>32</sup> Palace-guardism predicts that Arab elite units are likely to be the most concerned with internal security and therefore the least able in combat against foreign military forces.<sup>33</sup> In contradiction to this prediction, the Iraqi Republican Guards and Syrian commandos were first and foremost regime defense forces, but were still the most capable elements of their national armed forces. Palace-guardism also predicts that all Arab air forces should perform poorly, regardless of size or any other considerations because they will be concerned largely with internal security responsibilities and so will neglect training for combat with foreign air forces. This too clearly was not the case for the RJAF or the Iraqi Mirage pilots (or the Saudi F-15 pilots). Praetorianism makes no predictions whatsoever regarding elite forces: they are simply not an issue addressed by this theory. Finally, the Soviet-model theory predicts that Arab military units should perform better than the norm only to the extent that they were less influenced by Soviet military methods than the norm. The RGFC, the Iraqi Mirages, the RJAF, and the RSAF were neither more nor less influenced by Soviet military methods than the rest of their militaries (or than the Arab "norm") because none employed Soviet practices. On the other hand, the Syrian commandos were just as heavily-dependent on Soviet military

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<sup>32</sup> There is one exception to this rule. The underdevelopment theory would predict that if Arab air force personnel were from a higher socio-economic level than the Arab norm and had received technical education and a greater exposure to machinery they should perform better than the norm. While little information is available on Jordanian pilot background, much is known about the Saudis that does not fulfill these predictions. Saudi F-15 pilots do tend to come from the Royal family and the upper reaches of Saudi society, but the evidence indicates that this made them less likely to have a technical background or an understanding of machinery. While many Saudi princes had all sorts of expensive technological gadgets, the cultural stigma attached to technical work prompted the overwhelming majority of upper-class Saudi young men to pursue studies in law, religion, the humanities, and social sciences. Painfully few opted for engineering, science, or other technical fields.

<sup>33</sup> This point further undermines the central premise of the palace-guard theory, that a focus on internal security considerations diminishes military effectiveness. It is true that many Arab elite units were most concerned with defending the regime against internal threats. However, it is not the case that these forces therefore were the most inept when facing foreign military forces. Quite the contrary, they normally were the most capable in that role as well. The history of the Iraqi Republican Guard, the Syrian commandos, and the Saudi Arabian National Guard all make clear that Arab units whose first mission is the defense of the regime were frequently the most capable units in the entire army.

One important explanation for this phenomenon is that defending the regime against internal threats often meant defending the regime against the army. Consequently, regime defense units trained not so much for crowd control and busting up riots, but for conventional military operations to guard against a military coup. This point demonstrates an important fallacy of the palace-guard argument: that an army preoccupied with internal security considerations is unlikely to spend much time training or preparing for conventional military operations. While it is true that many Arab militaries were very concerned with internal security considerations, this did not mean that they were ignoring training for conventional military operations--the two are not mutually exclusive as the palace-guard theory posits.

methods as the rest of the Syrian military, which is to say that they were far more heavily "Soviet" than other Arab armies, yet they also performed *better* than the Arab norm.

I have left out the Syrian military in 1948 from the above discussion only because it so clearly fell into a different category than the other five exceptions. However, the Syrian 1948 case also is inexplicable from the perspective of the other theories. Syria was no less underdeveloped in 1948 than was Egypt or Iraq (and was far more underdeveloped than any of the Arab countries were in 1991) but its military performed better than any but the British-officered Arab Legion. The Syrian military also was no less focused on internal security considerations, no less reliant on Soviet methods, and no less involved in domestic politics than the Iraqi or Egyptian militaries of the same time, yet its competence was noticeably better. Finally, while commissarism in Syria in 1948 was relatively mild, and certainly nothing like what it would become under Asad, Syria was no less commissarist than Egypt or Iraq.

In short, only the Arab-culture theory can offer even a plausible explanation for these exceptions consistent with its tenets. Until better evidence becomes available, the Arab-culture explanation is the only one that makes any sense. Thus these six exceptions are far more damning to the competing theories than to the Arab-culture theory.

### General Conclusions

These findings generally confirm the predictions of the Arab-culture theory. The results of the first part of this chapter demonstrate that variations in the influence of Arab culture produced corresponding variations in Arab military effectiveness. The second part of this chapter showed that six exceptions to the rule of Arab military ineffectiveness may well be consistent with the Arab-culture theory, although definitive evidence is lacking. In addition, it illustrated the fact that these same exceptions are not consistent with any of the competing theories.

If my hypotheses regarding elite forces are correct, then between 1945 and 1991 Arab armed forces found at least three ways to improve their military effectiveness over the normal pattern. All three of these approaches were successful largely because they somehow mitigated the degree to which certain patterns of behavior derived from the dominant Arab culture deleterious to effective performance in modern warfare were present in the Arab militaries. The Iraqis and Egyptians learned to carefully structure their operations to emphasize the strengths derived from Arab culture while avoiding the necessity for junior commanders to take the lead in fluid, unstructured battles--an area of military operations greatly impeded by many of these cultural factors. The Iraqis, Syrians, and the Jordanians created smaller, elite forces that performed well because of the inherent advantages of elite units and because they were manned by soldiers whose behavioral patterns differed from the norm. Finally, the Jordanian and Syrian armed forces early on and Saudi Arabia's F-15 squadrons later on, all benefited from the very different culture of their militaries, which manifested behavioral patterns different from those of the larger Arab society.

The Arab-culture theory also predicts that as long as Arab armed forces were acting in a manner that diminished the influence of culturally regular Arab behavior on military operations, their armies and air forces would exhibit a higher degree of military effectiveness than the norm. However, whenever the same Arab forces were unable to adhere to these solutions, the poor patterns of military effectiveness would resurface. These predictions were also fulfilled by the evidence. The Egyptians and Iraqis enjoyed great success as long as they could follow their intricately planned and constantly rehearsed operational scripts, but their forces returned to the same patterns of ineffectiveness whenever they were forced to diverge from that script. Iraqi and Syrian elite units did perform noticeably better than the norm, but there was no similar change in

the rest of the armed forces, and the larger the elite force (and thus the more likely it was to reflect the culturally-regular population) the worse the force performed. Finally, the Jordanians and Syrians enjoyed their superior levels of military effectiveness only so long as they were able to preserve their unique military cultures. Once the Syrians closed the foreign schools and ceased to be trained by the French, their officers quickly began to reflect the larger Syrian society. Likewise, when Jordan instituted public schooling employing traditional Arab teaching methods, ousted the British, expanded the Legion, and increasingly inducted Palestinians and other hadari, Jordanian military culture slowly came to look more and more like the culture of the larger society, resulting in a corresponding erosion of Jordanian military effectiveness.

### **Additional Thoughts Regarding the Mitigation of the Influence of Arab Culture**

The Jordanian case also illustrates another important point about Arab military effectiveness since the Second World War. The previous chapter demonstrated that culture is inculcated into individuals throughout the process of their maturation and education. This suggests that it should be possible to change an individual's behavioral patterns by changing his or her education and upbringing. Simply put, since culture is conveyed through education, then by providing the individual with a different education it should be possible to "insulate" him or her from the influence of culture. Individuals exposed to different educational methods should develop different behavioral patterns. The experiences of the Jordanian military demonstrate the validity of this concept, since the differing educational and military training experiences of its personnel clearly produced different behavioral patterns--i.e., a different culture.

Thus these cases demonstrate that one solution to problems of Arab military effectiveness is to change the educational and military training systems. Of course, this is easier said than done. The problem for the military is one of socializing civilian personnel drawn from the larger society into the cultural patterns of the military, and the more different the military culture is from the culture of the larger society, the more difficult this is likely to be. The Jordanian (and Syrian) cases suggest that, in general, the ease or difficulty of changing an individual's accustomed behavior is likely to depend on three factors: first, the individual's commitment to the process; second, the length of time the individual is exposed to the new educational process; and third, at what point in the individual's life he is first exposed to the new educational process. These last two factors are highly interactive. That is, if a child can be taken at an early age and put into a new educational system then it is likely it will take a shorter period of time for him to abandon the value system he learned from his parents (and any early schooling) and adapt the new value system being instilled by the new school. By contrast, a military that starts with 18 year old men will have a much harder time getting them to abandon the culturally-derived patterns of behavior they learned from their family and their schooling--it is entirely possible, it will just take much longer. Thus if a military hopes to use its training regimen to socialize its recruits to a military culture that is significantly different from the culture of the larger society, it is likely to need a good deal of time to do so.

The Jordanian case suggests that voluntary membership and longer terms of service can be highly useful, and perhaps critical, elements in determining to what extent a military can train the culture "out" of its personnel. If the armed forces are looking to create soldiers whose behavioral patterns differ from those of the general society then these factors greatly ease that process. Volunteers are likely to be far more enthusiastic about the military and military training than conscripts and will work harder to learn and internalize the codes of the military, even if those codes run against the values of the broader society. Second, and perhaps of greater importance, the longer terms of service mean that the military has a longer period of time to socialize these personnel to the military culture. Socializing individuals to a new culture, getting them to abandon their wonted values and ways of thinking about the world for new ones, can only occur as a result of constant inculcation of those values over long periods of time.





## Chapter 14

### Testing the Soviet-Model Theory Against the Arab-Culture Theory

In Chapter 11, I set up a competitive test employing the congruence method comparing the Arab-culture theory to the three strongest alternative explanations for Arab military ineffectiveness--reliance on a Soviet model of operations, politicization in all its various forms, and underdevelopment. Although this test demonstrated that the Arab culture theory has considerable explanatory power, because there are areas of military effectiveness in which more than one theory successfully predicted Arab behavior, the test was only of limited value in assessing which theories have greater explanatory power than the others. In this chapter and the following two, I again construct competitive tests employing the congruence method, but I conduct the tests in such a way that only one of the theories can pass. I do this by comparing those predictions of the theories which are the exact opposite of each other, thus the evidence of the case will support one of the theories and contradict the other. Consequently, the theory that successfully passes the test should be considered to have greater explanatory power than the theory that fails.

Each of these tests has two parts. First, for each competing theory, I hold culture constant and vary the other independent variable. I do this by examining one or more cases of Arab militaries that underwent a noticeable change in the strength of the competing independent variable over time. The cultural explanation would predict that the patterns of military ineffectiveness would remain unchanged (because the culture did not change), while the alternative explanations would predict significant differences in combat performance because of the variance in the competing independent variable. Second, I vary culture while holding the other independent variable constant. I do this by comparing the general performance of the Arab states with the performance of one or more non-Arab states that were strongly influenced by the same competing independent variable. In these tests, the cultural explanation would predict differences in military performance between the Arab and non-Arab states while the competing explanations would predict similar patterns of military effectiveness across the cultures.

For each of these competitive tests, the final conclusions are derived from a comparison of the results of the two different cases used in each test. If the results indicate that there is greater variance in military effectiveness when culture is varied and the other variable held constant than when culture is held constant and the other variable is varied, they will support the contention that the Arab-culture theory has greater explanatory power than the alternative theory being tested. However, if there is greater variance in military effectiveness when culture is held constant and the other variable is varied than when culture is varied and the other variable is held constant, this demonstrates that the alternative theory has greater explanatory power than the Arab-culture theory.

In this chapter, I compare the theory that reliance on a Soviet model of operations has been the cause of Arab military ineffectiveness since World War II with the theory that this phenomenon was caused by patterns of behavior associated with the dominant Arab culture. I begin by briefly recapitulating the findings of the competitive test performed in Chapter 11 regarding the Soviet-model theory. Next, I examine the experience of the Egyptian military from 1973 to 1991, during which Cairo consciously cast off its Soviet-style military system. This section therefore constitutes an instance in

which culture remained (essentially) constant while reliance on a Soviet model varied. I then compare the experience of the Arab militaries in combat since 1945 with the experience of Cuban forces in Angola and Ethiopia. The Cuban military adhered more strictly to the Soviet model of military operations than any of the Arab armed forces ever did. Thus, this part of the chapter examines an instance in which culture varies (by comparing Arab culture to Cuban culture), but reliance on a Soviet model remained a constant. For this test, the Arab-culture theory would predict that there should be greater variance in the military effectiveness of the Arab armies and the Cubans than within the Egyptian military before and after the "de-Sovietization." Conversely, the Soviet-system theory would predict greater variance in the Egyptian armed forces before and after de-Sovietization than between the Arabs and the Cubans.

### **The Soviet Theory and Arab Military History: A Recapitulation**

The Soviet theory performed extremely poorly in the congruence tests conducted in Chapter 11. The greatest single problem for the theory was that it could not pass the test against the null hypothesis. That is, *Arab militaries behaved very similarly regardless of whether they employed a Soviet model of military operations*. Consequently, with the partial exception of air-to-air operations, none of the problems experienced by Arab militaries could be attributed to their use of Soviet methods. This constitutes failing the test against the null hypothesis because the presence of the independent variable (reliance on a Soviet military model) varied greatly from Syria--which avidly adopted Soviet practices--to Jordan and Saudi Arabia--which had no Soviet influence whatsoever--yet there was no corresponding change in the dependent variable (Arab military effectiveness). Failing the test against the null hypothesis is a huge blow to the Soviet model theory.

To make matters worse for this explanation, Arab armed forces actually showed improvement in certain areas of military effectiveness after adopting Soviet methods. The Soviet-model theory is an effort to explain *poor* Arab military performances, yet in actuality it explained more Arab strengths than weaknesses. This makes it even more difficult to accept the basic premise of the Soviet model theory, which is that the Arabs fared badly in combat between 1945 and 1991 because they used Soviet methods that were themselves flawed.

### **Egypt, 1973-1991**

Egyptian military fortunes between 1973 and 1991 further demonstrate the absence of a correlation between reliance on a Soviet system and the persistent patterns of Arab military ineffectiveness. By the October War, Egypt had adopted a great deal of Soviet tactics and doctrine. Although Egypt was not wholly reliant on Soviet practices, the Soviet method formed the basis of its approach to combat operations both on the ground and in the air. In particular, Egyptian armor, air defense, and air-to-air tactics were heavily modeled on those of the Soviets. After the Camp David accords, however, Egypt began to replace its Soviet practices with a Western-style military system. Since then, the Egyptians have received enormous military aid from the United States, including considerable advisory assistance. Nearly 13 years after the start of this shift from Soviet to Western methods, the Egyptian military continues to demonstrate the same patterns of military ineffectiveness as it did in the 1967 and 1973 Arab-Israeli Wars.

Although Egypt's first-line air and ground units were wholly converted to Western military equipment and practices by 1991, and many of Cairo's troops and officers

received US training, there was no significant change in patterns of military behavior. The Egyptians continued to demonstrate the same rigid hierarchy, unwillingness to take initiative, inability to improvise at tactical levels, poor use of maneuver, dissembling and compartmentalization of information, inattention to tactical intelligence gathering, and poor combined arms operations as they did in 1973. Egyptian Air Force performance remained abysmal despite the influx of American fighters such as the F-4E and F-16 and the American training and advisory effort provided to Cairo's air force. The performance of Egyptian Army units in Operations Desert Storm in 1991 showed no improvement over 1973 despite this wholesale abandonment of Soviet practices. Indeed, in some ways, the Egyptians actually performed worse in 1991 than in 1973. For example, two of Egypt's greatest strengths during the October War had been its superbly developed planning and the remarkable performance of its combat engineers. In 1991, Egyptian planning was haphazard and amateurish and their engineering effort was mediocre at best. Indeed, US military officers who trained with the Egyptians privately admitted that the Egyptians had improved little, if at all, despite their renunciation of Soviet practices and conversion to American methods.

This pattern of behavior is another strong knock against the Soviet-model theory and in favor of the Arab culture theory. Between 1973 and 1991 the influence of Soviet practices on the Egyptian military declined precipitously while the influence of Arab culture remained (largely) unchanged. The Soviet-model theory predicts that Egyptian military performance should have improved markedly, while the Arab culture theory predicts that Egyptian military performance should have remained the same. In fact, Egyptian military performance remained the same, and may have declined somewhat.

### **Cuban Military Effectiveness, 1975-1988**

A comparison of Arab military performance with Cuban military experience during the 1970s reveals significant differences in military effectiveness between Arab and non-Arab forces despite a common reliance on Soviet military practices. The Cuban military relied heavily on a Soviet-style of operations, probably more so than either Syria or Egypt. Cuban forces employed Soviet tactics and doctrine in all types of conventional military operations. Cuban officers and, especially, pilots received extensive instruction from Soviet advisers and many underwent training in the USSR.<sup>1</sup> Nevertheless, the performance of Cuban forces in Ethiopia in 1978 and Angola does not show the same patterns of military ineffectiveness that have characterized Arab operations since 1945.

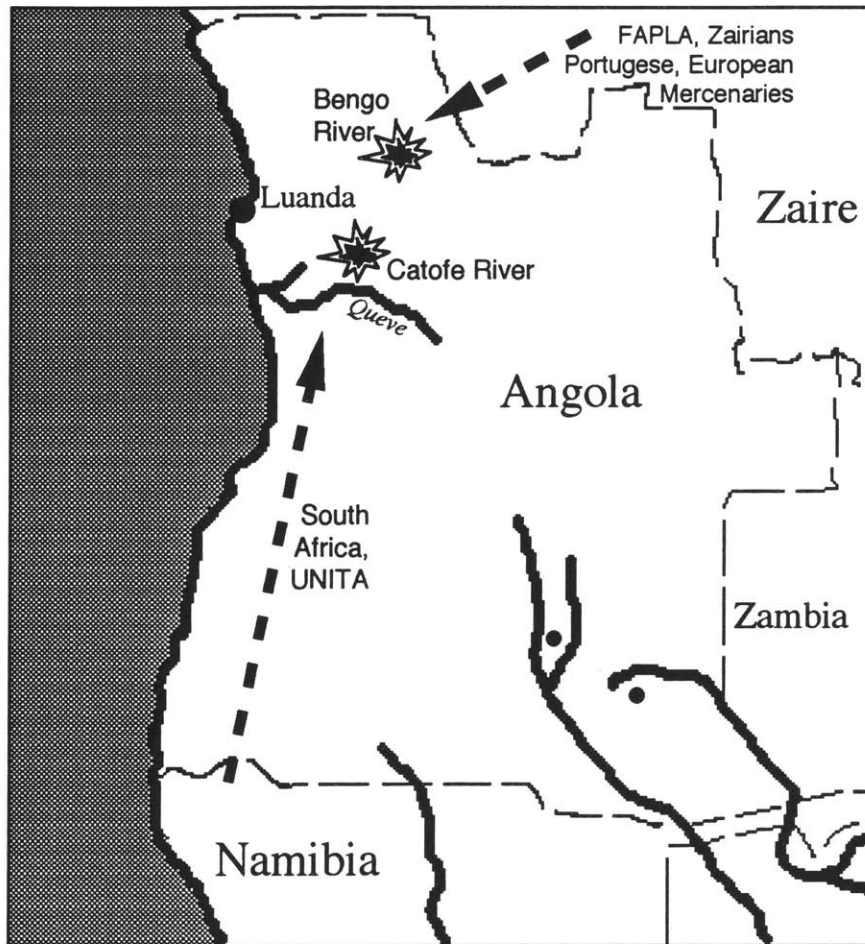
#### **Cuban Military Operations, An Overview**

Between 1975 and 1988 Cuban armed forces were almost continuously involved in combat operations. As part of Fidel Castro's efforts to spread the Cuban revolution, Cuban military units fought on behalf of socialist governments throughout Africa and Latin America. In particular, in Angola in 1975-1976 and again in 1987-1988, and in Ethiopia in 1977-1978, Cuban forces engaged in full-scale conventional military operations against capable adversaries.

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<sup>1</sup> Mitchell Bainwoll, "Cuba," in Richard A. Gabriel ed., *Fighting Armies: Non-Aligned Third World and Other Ground Armies, a Combat Assessment*, (Westport: Greenwood Press, 1983), pp. 228-230, 233; Defense Intelligence Agency (DIA), *Handbook of the Cuban Armed Forces*, DDB-2680-62-79, April 1979, pp. XIII; chapter 1 pp. 1, 4, 14-16; chapter 2, pp. 18-31, chapter 5, pp. 1, 11-12, 18-47, 49-65; Juan M. Del Aguila, "The Changing Character of Cuba's Armed Forces," in Jaime Suchlicki ed., *The Cuban Military Under Castro*, (Miami, Fla: Research institute for Cuban Studies, University of Miami, 1989), pp. 27, 31; Leon Gouré, "Cuban Military Doctrine and Organization," in Suchlicki ed., pp. 66-69; Gouré, "Soviet-Cuban Military Relations," in Suchlicki ed., pp. 165-182.

## Cuban Operations in Angola, 1975-1976



---> - Moves by forces opposing Cubans, MPLA



- Major Battles

### *Angola, 1975-1976*

In October 1975, the Cubans came to the rescue of the Popular Movement for the Liberation of Angola (MPLA) as it fought to assert its claims against the rival National Union for the Total Independence of Angola (UNITA) and the National Front for the Liberation of Angola (FNLA). The MPLA had seized the capital of Luanda after the Portuguese pulled out earlier in the year, but by the fall, they were facing a South African invasion from Namibia in support of UNITA's claims, as well as an FNLA offensive from Zaire bolstered by Portuguese special forces, Zairian regulars, and Western mercenaries. In October, the Cubans began sending advisers to aid the MPLA. However, when it became apparent in the first week of November that this would be inadequate, Castro made the decision to commit Cuban combat units to the fray. A huge airlift (eventually with Soviet aid but initially all Cuban) began pouring Cuban forces into the country. By the second week of November, 4,000 Cuban soldiers were fighting the FNLA in the north and the South African Defense Force (SADF) and UNITA in the south.<sup>2</sup>

Cuban intervention turned the tide of the Angolan Civil War. On 10 November, Cuban and MPLA units (with some Katangan rebels and Soviet advisers) decisively defeated the FNLA and its grab-bag of allies at the Battle of the Bengo River. In the south, small Cuban units were consistently hammered by South African mechanized task forces at first. But the Cubans maintained unit cohesion and their commanders wisely fell back before SADF flanking maneuvers could envelop their positions and cut them off completely. As a result, by late November the Cubans had formed a thin defensive line protecting Luanda from the south mostly along the Queve river.<sup>3</sup>

About 3,000 South African troops attacked this line in late November and early December and defeated the Cubans in the Battles of Bridge 14 and the Catofe river. Nevertheless, for the first time during the entire Angolan civil war, the South Africans took significant casualties. Moreover, Havana continued to pour troops into Angola, reaching 10,000 in January 1976. The realization that further advances against the Cubans would be increasingly costly and difficult prompted Pretoria to end its involvement in Angola and withdraw its units to Namibia. The withdrawal of the SADF allowed the Cubans to mount offensives of their own against UNITA in the southeast and against the FNLA in the north. Supported by MPLA forces, Cuban units obliterated the FNLA, driving its tattered remnants into Zaire, and then mauled UNITA, forcing it back into the deep bush of Zambia and southeastern Angola. By February 1976, thanks mostly to the efforts of nearly 36,000 Cuban troops, Angola was largely in MPLA hands, the FNLA had been virtually destroyed and UNITA was so badly battered that it took several years before it could resume guerrilla operations against the MPLA government.<sup>4</sup>

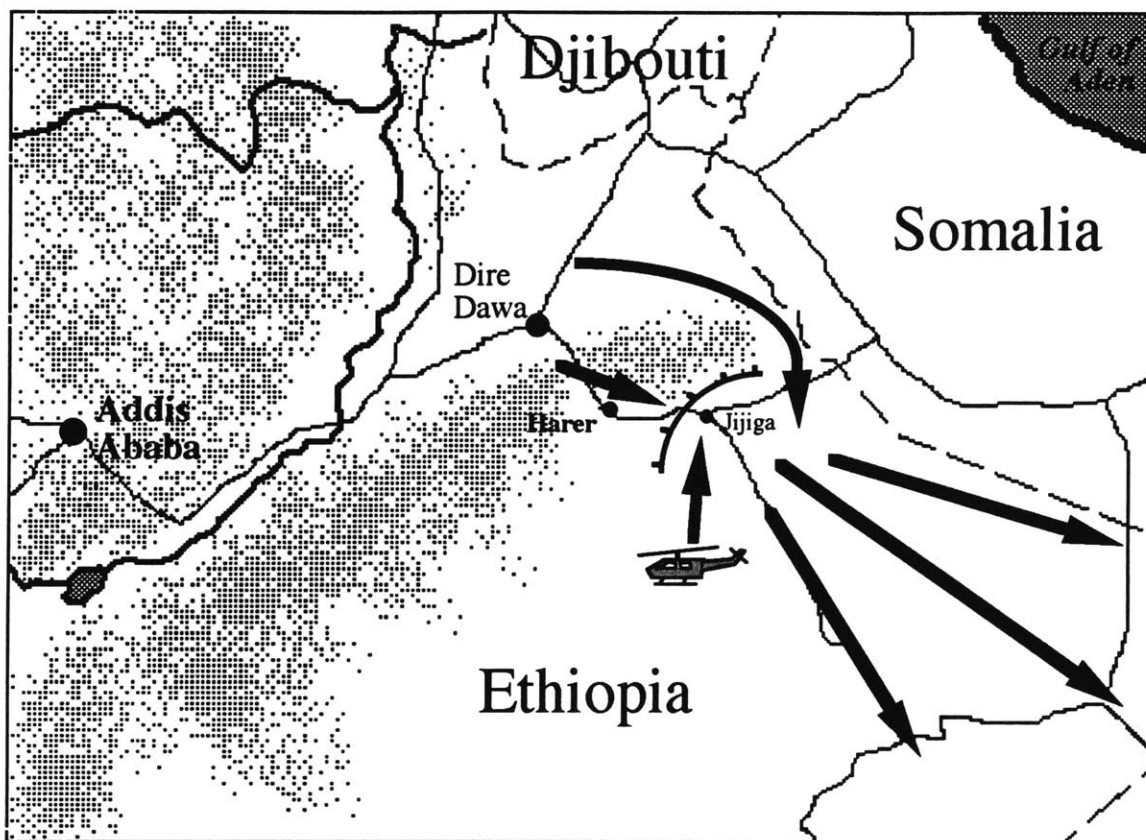
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<sup>2</sup> Bainwooll, p. 231; Rafael Fermoselle, *The Evolution of the Cuban Military, 1492-1986*, (Miami, Fla: Ediciones Universal, 1987), pp. 399-402; W. Martin James III, *A Political History of the Civil War in Angola, 1974-1990*, (New Brunswick, NJ: Transaction, 1992), pp. 62-65; IISS, "Angola," *Strategic Survey, 1975*, (London: IISS, 1975), p. 36; Daniel Spikes, *Angola and the Politics of Intervention*, (Jefferson, NC: McFarland and Co. Inc, Publishers, 1993), pp. 147-203.

<sup>3</sup> William J. Durch, "The Cuban military in Africa and the Middle East: From Algeria to Angola," *Studies in Comparative Communism*, Vol. XI, No. 1/2, Spring/Summer, 1978, pp. 67-68; Fermoselle, pp. 402-404; Ian Greig, *The Communist Challenge to Africa: An Analysis of Contemporary Soviet, Chinese and Cuban Policies*, (Surrey, UK: Foreign Affairs Publishing Co. Ltd., 1977), p. 231; James, pp. 65-78; Spikes, pp. 212-307; Phyllis Greene Walker, "National Security," in James D. Rudolph ed., *Cuba: A Country Study*, (Washington, DC: GPO, 1985), p. 279.

<sup>4</sup> Fermoselle, pp. 402-404; Greig, p. 231; James, pp. 65-78; Keith Somerville, *Foreign Military Intervention in Africa*, (London: Printer Publishers, 1990), p. 99; Spikes, pp. 212-307; Walker, p. 279; and author's interview with Jorge I. Domínguez, July 1995.

### Cuban Operations in Ethiopia, 1977-1978



-  - Cuban/Ethiopian attacks, February-March 1978
-  - Somali Defense Lines

### *Ethiopia, 1977-1978*

In July 1977 Somalia invaded Ethiopia in hopes of wresting the disputed Ogaden away from Ethiopia before the new Marxist government was able to consolidate power and rebuild its military power. The Somali army in 1977 was among the best-armed and most capable in sub-Saharan Africa, having benefited from years of diligent Soviet training, while the US-trained Ethiopian military was in shambles as a result of the recent revolution. Somalia sent 12 mechanized/motorized brigades with 250 T-55 tanks against the Ethiopians who could muster only one understrength division and about 100 mostly obsolete US M-41 and M-47 tanks. As a result, Somali forces quickly outmaneuvered and outfought Ethiopian units in the Ogaden, driving 250 km into Ethiopia and conquering 60 percent of the disputed area in a little over a week. By October, Somali armored pincers had captured the city of Jijiga and the vital Gara Marda pass. At this point, the Soviets and the Cubans decided to make a major military commitment to prop up the new socialist government of Ethiopia and so in November and December 1977 Soviet advisers and equipment and Cuban combat troops were dispatched to Ethiopia. As the final act in the Somali invasion, between October 1977 and January 1978 20,000 Somali troops attempted to take the strategic city of Harer which controlled access between the Ogaden and central Ethiopia. However, they were stopped cold in bloody fighting by 11,000 Cubans and as many as 50,000 Ethiopian soldiers and irregulars.<sup>5</sup>

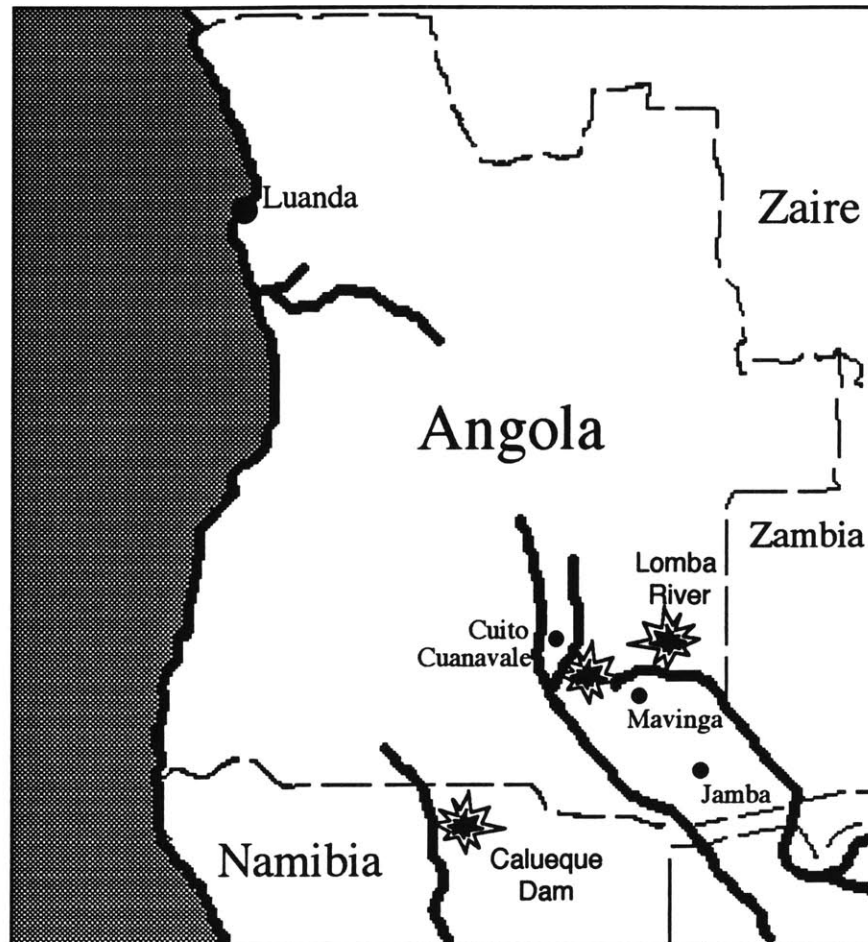
In February 1978, the Ethiopian/Cuban forces counterattacked. In a brilliant operation engineered by Soviet General Vasily Petrov and Cuban General Arnaldo Ochoa Sanchez, Ethiopian/Cuban forces conducted a three-pronged assault against Jijiga. Cuban armor bypassed the Marda pass, swinging around the eastern edge of the Ahmar mountains while Cuban and Ethiopian forces launched a frontal assault on Jijiga from Harer. Finally, Cuban armor was helo-lifted southwest of Jijiga. While the direct assault from Harer fixed the attention of the Somali defenders the Cuban thrust around the mountain and the heliborne insertion allowed the Cuban armor to flank the Somali defenses around Jijiga and the Marda pass from both north and south. In three days of fighting in early March, the Cubans and Ethiopians annihilated four Somali brigades at Jijiga, knocking out roughly 150 Somali tanks and killing almost 3,000 of 6,000 Somali troops there. Cuban-piloted MiGs and Ethiopian-piloted F-5s gained air superiority over the Ogaden, downing considerable numbers of Somali MiGs. Afterwards, in a series of rapid encircling maneuvers, Cuban armor obliterated the remaining Somali forces in the Ogaden. When Somalia committed its strategic reserve (a mechanized brigade task force) Cuban pilots flying Ethiopia's new MiGs and Sukhois busted up the Somali columns and sent them reeling across the border. By the end of March 1978 the Ogaden was back in Ethiopian hands while the Somalis had suffered 8,000 dead and lost over 200 tanks and 25-30 combat aircraft.<sup>6</sup>

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<sup>5</sup> Colin Legum ed., *Africa Contemporary Record, 1977-1978*, [hereafter referred to as "ACR" with appropriate years], (NY: Africana Publishing Co., 1979), pp. B225-228; Colin Legum and Bill Lee, "Crisis in the Horn of Africa: International Dimensions of the Somali-Ethiopian Conflict," in Colin Legum ed., *ACR, 1977-1978*, (NY: Africana Publishing Co., 1979), pp. A44-45; William H. Lewis, "Ethiopia-Somalia (1977-78)," in Robert Harkavy and Stephanie Neuman, *The Lessons of Recent Wars in the Third World*, Vol 1, (Lexington, Ma: Lexington Books, 1986), pp. 99-100, 110-112; Thomas Ofcansky, "National Security," in Helen Chapin Metz ed., *Somalia: A Country Study*, (Washington, DC: GPO, 1992), pp. 181-185; Nelson P. Valdés, "Cuban Foreign Policy in the Horn of Africa," *Cuban Studies*, 10:1, (Jan. 1980), pp. 54-58.

<sup>6</sup> James E. Dougherty, *The Horn of Africa: A Map of Political-Strategic Conflict*, (Institute for Foreign Policy Analysis: Cambridge, MA: 1982), pp. 34-35; IISS, "The Horn of Africa," *Strategic Study*, 1978, (London: IISS, 1978), pp. 94-95; Legum, *ACR 1977-1978*, pp. B228-235, B377-378; Lewis, pp. 112-114; Ofcansky (Somalia), pp. 185-186; Thomas P. Ofcansky, "National Security," in Thomas P. Ofcansky ed., *Ethiopia: A Country Study*, (Washington: GPO, 1991), pp. 297-314; Somerville, p. 136; Valdés, pp. 58-61.

## Cuban Operations in Angola, 1987-1988



 - Major Battles



### *Angola, 1987-1988*

Between 1976 and 1987, Cuba maintained 20-30,000 troops in Angola. However, these units mainly garrisoned the major towns and guarded key roads and rail lines. Cuban forces participated in some counter-insurgency (COIN) operations in the late 1970s, but took casualties and accomplished little. Consequently, Castro decreed that Cuban troops would remain in Angola to defend the country against foreign threats--especially the SADF--but would leave COIN operations against UNITA up to the People's Armed Forces of Angola (FAPLA). FAPLA units had both Cuban and Soviet advisers, were supported by Cuban technicians, and directed mostly by Soviet generals.<sup>7</sup>

Beginning in 1985, FAPLA began a series of dry-season offensives against UNITA's main staging base and nominal "capital" at Jamba in southeastern Angola. The first of these made good progress initially, sweeping UNITA forces from the field and threatening the forward UNITA base at Mavinga. This success prompted South African intervention, and in September 1985 the SADF (supported by UNITA light infantry) smashed FAPLA's main body at the Lomba river. Then in 1986, FAPLA was effectively prevented from launching its planned offensive because of SADF and UNITA ground and air raids on its supply lines and forward depots.<sup>8</sup>

In 1987, FAPLA was able to secure its supply lines with Cuban aid and a new Soviet-supplied/Cuban-manned air defense system. This belt of surface-to-air missile (SAM) sites, radars and fighter bases denied the South African Air Force (SAAF) air superiority and greatly impeded their operations. Once again, FAPLA units routed UNITA forces and drove on Mavinga in the early stages of the offensive. But once again, the South Africans intervened in force, committing roughly 3,000 troops in several mechanized and armored task forces. FAPLA units suffered from very poor unit cohesion and were dependent on their Soviet armor, which made their forces slow and cumbersome in the thick bush. In September 1987, SADF forces again caught the FAPLA units at the Lomba river and severely mauled them, killing 1,700 men. This time, Pretoria wanted to finish off the FAPLA elements to prevent any further offensives and so the SADF was reinforced and ordered to pursue and destroy the Angolan forces. The FAPLA brigades fell back on their base at Cuito Cuanavale and quickly established a defensive perimeter.<sup>9</sup>

Beginning in December 1987, SADF units began to systematically reduce the FAPLA positions around Cuito Cuanavale. The South African threat both to the FAPLA field units and to the Cuito Cuanavale base prompted Castro to once again directly intervene in Angolan fighting. Beginning in December 1987, Cuban combat units were redeployed to Cuito Cuanavale from garrisons elsewhere in Angola. General Ochoa Sanchez was sent to Cuito Cuanavale to take command of defensive operations there. In addition, the elite 50th Division and other units were airlifted directly to Angola from Cuba, eventually bringing Cuban strength in Angola to approximately 50,000 men in early 1988. The influx of Cuban combat units to the Cuito Cuanavale sector quickly altered the course of the fighting. Cuban airpower constantly harassed South African

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<sup>7</sup> Fermoselle, pp. 403, 418; Helmoed-Römer Heitman, *War in Angola: The Final South African Phase*, (Gibraltar: Ashanti Publishing Ltd., 1990), p. 16; Olga Nazario, "Cuba's Angola Operation," in Sergio Díaz-Briquets, ed. *Cuban Internationalism in Sub-Saharan Africa*, (Pittsburgh, Pa: Duquesne University Press, 1989), pp. 107-109, and fn. 14, p. 203; Somerville, p. 150.

<sup>8</sup> Heitman, pp. 13-32; IISS, *Strategic Survey, 1985-1986*, (London: IISS, 1986), pp. 188-189; IISS, *Strategic Survey, 1986-1987*, (London: IISS, 1987), p. 189; Daniel S. Papp, "The Angolan Civil War and Namibia: The Role of External Intervention," in David R. Smock ed., *Making War and Waging Peace: Foreign Intervention in Africa*, (Washington, DC: United States Institute of Peace Press, 1993), p. 180.

<sup>9</sup> Jeremy Harding, *The Fate of Africa: Trial by Fire*, (NY: Simon and Schuster, 1993), pp. 53-54; Heitman, pp. 32-108; Jeffrey Herbst, "The Angola-Namibia Accords: An Early Assessment," in Díaz-Briquets, pp. 145-146; IISS, *Strategic Survey, 1987-1988*, (London: IISS, 1988), pp. 193-194; James, pp. 173-175; Somerville, pp. 152-155.

units, greatly impeding their movements and silencing the G-5 and G-6 artillery pieces that previously had dominated the fighting. Cuban ground forces conducted a more mobile defense that was better suited to countering the rapid flanking maneuvers of the South Africans. In February and March 1988, South African attacks on the Cuito Cuanavale defenses began taking significant casualties--at least 230 dead and probably as many as 22 SAAF aircraft shot down--without accomplishing any of their goals.<sup>10</sup> This change prompted the SADF to call off its offensive and fall back to Namibia.<sup>11</sup>

Finally, in an effort to compel Pretoria to negotiate a solution to the stalemate in southwest Africa, Cuba began massing troops in southern Angola along the Namibian border. Nearly 15,000 Cuban troops, including the 50th Division, were deployed in southern Angola by May 1988, and these forces were aggressively patrolling and raiding in northern Namibia. South Africa feared that Cuba intended to invade Namibia and sent a mechanized task force of reinforced brigade strength to harass and disrupt Cuban preparations for such an assault. The South Africans jumped off from their positions around the Calueque dam and ran into a Cuban trap. Cuban combined arms teams blunted the SADF attack with considerable losses to the South Africans, then the Cubans launched an operational-level counterattack which sent mechanized formations looping around the flank of the South African forces. The Cubans were able to get in among the South African support elements and mauled these units, but the tank-heavy Cuban forces were unable to complete their encirclement before the light, quick SADF combat units slipped away into the bush. Nevertheless, at Cuito Cuanavale and the Calueque dam the South Africans took heavier losses than in any other battles since World War II. These losses soured the war in the eyes of the South African public, forcing Pretoria to agree to a negotiated settlement of the war.<sup>12</sup>

### **Patterns of Cuban Military Effectiveness**

During their various campaigns in Africa between 1975 and 1988 Cuban forces consistently performed well in some combat operations but also consistently performed poorly in others, just as the Arabs did between 1945 and 1991. However, there was very little overlap between the Cuban patterns of performance and Arab patterns of performance. For the most part Cuban forces fought quite well, and while they did experience problems on the battlefield that hindered their achievements, these were rarely the same as those experienced by the Arabs.

Of greatest importance, Cuban tactical leadership was quite good. Cuban commanders from brigade-level down were generally flexible and creative in their

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<sup>10</sup> It is impossible to know the actual numbers of South African casualties. First, the South African government only published the numbers of white South Africans killed in the fighting. However, many, perhaps most, of the SADF troops engaged in these battles were blacks or European mercenaries. In particular, South Africa's elite 32nd "Buffalo" Battalion bore the brunt of the fighting in every one of these operations. The 32nd was an oversize unit comprised of black volunteers from Namibia and Angola trained by the SADF with a large number of European and American mercenaries. [On the 32nd Battalion, see Raymond W. Copson, *Africa's Wars and Prospects for Peace*, (Armonk, NY: M. E. Sharpe, 1994), pp. 120-121; Somerville, p. 152.] Second, there is a consensus among experts on the fighting in Angola that the South African government greatly under-reported the numbers of white South Africans killed in these battles so as not to arouse public antipathy. Thus, most sources conclude that actual numbers of white South African casualties are probably "significantly" higher than the figures released by official spokesmen. See, Copson, p. 121; Legum, *ACR, 1987-1988*, p. B578; Somerville, p. 99.

<sup>11</sup> Copson, p. 121; Harding, pp. 55-57; Heitman, pp. 118, 171, 190; Herbst, p. 146; IISS, *Strategic Survey, 1987-1988*, p. 194; James, pp. 175-176, 231; Legum, *ACR, 1987-1988*, pp. B575-579; Nazario, p. 111; Papp, pp. 181-183; Somerville, p. 155; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>12</sup> Copson, p. 121; Harding, p. 57; Heitman, pp. 199, 295-298; Herbst, p. 146; Papp, pp. 183-185; and author's interviews with Lt. General Bernard Trainor, May, 1994.

approach to combat situations.<sup>13</sup> They were very aggressive and rarely could be faulted for failing to seize the initiative or take advantage of opportunities arising in the chaos of battle.<sup>14</sup> Indeed, in Angola Cuban advisers to FAPLA were constantly at odds with Soviet advisers to FAPLA: the Cubans never ceased to urge more aggressive and daring actions on their Angolan charges while the Soviets consistently advised caution and careful, deliberate moves.<sup>15</sup> Cuban tactical units made excellent use of tactical maneuver, for instance mauling SADF units with flanking counterattacks at Cuito Cuanavale and Calueque dam in 1988.<sup>16</sup> Cuban tankers were mediocre marksmen but consistently attempted to "stalk" South African armor in the bush of Angola and otherwise maneuvered to gain advantageous positions over their adversaries.<sup>17</sup> Likewise, Cuban anti-tank teams relentlessly hunted SADF tanks both at Cuito Cuanavale and Calueque dam in 1988, forcing the South African armored units to fall back several times or else risk heavy losses.<sup>18</sup> Cuban artillery units were accurate and could shift fire very well.<sup>19</sup> Although often outdueled by South Africa's outstanding G-5s and G-6s, in 1987-1988 when Cuban MiGs eventually shut down the SADF artillery units, Cuban M-46 and D-30 batteries displayed an impressive ability to chase South African formations around the battlefield and to quickly shift fire to cover the operations of their own maneuver units.<sup>20</sup> Cuban tactical commanders also paid excellent attention to reconnaissance and other forms of intelligence gathering.<sup>21</sup>

The ultimate success of all three major Cuban military campaigns derived from these tactical skills. In 1975-76, Cuban forces smashed the FNLA in the Bengo river valley through their flexibility, aggressiveness, use of maneuver, and excellent artillery skills. Cuban multiple-rocket launcher (MRL) units broke up the initial FNLA assault while Cuban troops in jeeps with rocket-propelled grenades (RPGs), recoilless rifles, and heavy machine guns darted around the battlefield, surprising and outflanking FNLA units again and again. Eventually, Cuban reconnaissance found the left flank of the FNLA force, and Cuban mechanized units counterattacked there, smashing in this flank and shattering the FNLA army.<sup>22</sup> Similarly, in the south against the SADF, Cuban units were able to harass, delay and eventually halt the South Africans by setting ambushes when possible, watching their flanks, reacting quickly to SADF enveloping maneuvers, and retreating and rapidly reforming their defenses when the South Africans threatened to cut them off.<sup>23</sup> In the Ogaden, the Cubans made superb use of maneuver, repeatedly

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<sup>13</sup> Bainwooll, p. 241; Fermoselle, p. 7; Heitman, pp. 197, 219, 221, 251, 262; Spikes, p. 266; and author's interviews with Lt. General Bernard Trainor, May 1994. Fermoselle begins his landmark work on the history of the Cuban military by noting consistent patterns of behavior throughout Cuban military history which he attributes to cultural factors. Thus he notes that a strong streak of ingenuity is considered a defining feature of Cuban culture and that Cuban military forces have demonstrated this in combat time and again.

<sup>14</sup> Fermoselle, p. 450; Heitman, pp. 75-78, 251, 261, 301, 305; Spikes, pp. 260-261; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>15</sup> Sergio Díaz-Briquets, "Introduction," in Díaz-Briquets ed., p. 4.

<sup>16</sup> Heitman, p. 233; Lewis, pp. 111-113; Ofcansky (Ethiopia), p. 313; Ofcansky (Somalia), p. 186; Spikes, pp. 260-261; and author's interviews with Lt. General Bernard Trainor, May 1994, and Jorge I. Domínguez, July 1995.

<sup>17</sup> Heitman, pp. 75-78, 231, 233.

<sup>18</sup> Heitman, pp. 304-305.

<sup>19</sup> Heitman, pp. 168, 195, 197, 233, 250, 280, 304; Spikes, pp. 238, 244-246, 262.

<sup>20</sup> Heitman, p. 233.

<sup>21</sup> DIA, chapter 5, p. 16; Heitman, pp. 299, 302, 305; and author's interviews with Lt. General Bernard Trainor, May 1994, and Jorge I. Domínguez, July 1995.

<sup>22</sup> Spikes, pp. 260-261.

<sup>23</sup> Spikes, pp. 240, 247, 262-271.

outflanking and enveloping the defending Somali forces. Because evidence regarding the combat experience of Cuban forces in Ethiopia is limited, it is unclear to what extent Cuban units exercised creativity and improvisation. However, the pace of operations and skill shown by Cuban forces in these fluid maneuver battles strongly suggests that Cuban tactical commanders were willing to improvise and take the initiative when opportunities presented themselves in these battles as well.<sup>24</sup> Finally, at Cuito Cuanavale and the Calueque dam in 1988, Cuban units relied on constant patrolling to deprive SADF units of the element of surprise, rapid counterattacks by mobile reserves, and aggressive maneuvers against the SADF's flanks to defeat and ultimately drive back the South Africans.<sup>25</sup> Even the South African author Helmoed-Römer Heitman grudgingly said of the Cuban-FAPLA units defending Cuito Cuanavale that they had, "once again demonstrated their ability to conduct an effective and imaginative defence, and competent control of their artillery."<sup>26</sup>

Cuban strategic leadership also was very good. Cuban operations were clever, creative and well thought-out. Cuban defenses, especially at Cuito Cuanavale in 1987, were extremely formidable and creative and completely frustrated South African assaults. Cuban offensives invariably relied on some form of operational level maneuver to defeat their enemy. In Angola in 1976, Cuban forces destroyed the FNLA with a series of ground thrusts combined with an amphibious landing deep in the rear of the FNLA forces. Later, they coupled a direct ground attack with a heliborne assault that shattered the UNITA lines in southern Angola. Similarly, in Ethiopia in 1978, the Cubans made a frontal assault to fix the Somalis at Jijiga and then overpowered them with a flanking maneuver and a vertical envelopment.<sup>27</sup>

There are two mitigating circumstances that muddy the waters in attempting to assess Cuban generalship, however. First, in some of these operations--notably in Ethiopia in 1977-1978--Cuban forces ultimately were under the command of a Soviet general, thus it is unclear to what extent Cuban generals were responsible for the conduct of this campaign.<sup>28</sup> Second, all three of Cuba's major conventional campaigns in Africa were under the direction of a single man, General Arnaldo Ochoa Sanchez.<sup>29</sup> Thus it is hard to tell to what extent Cuba's reputation for high quality strategic leadership is based upon the performance of a single man. On the other hand, the available evidence indicates that at least Ochoa Sanchez's senior field commander at Cuito Cuanavale, General Cintra Frias, also performed very ably. This bit of information suggests that Ochoa Sanchez's performance may not have been anomalous.<sup>30</sup>

Cuban forces demonstrated superb cooperation both within units and among units

<sup>24</sup> Lewis, pp. 99-114; Ofcansky, (Ethiopia), p. 313; Ofcansky (Somalia), p. 186.

<sup>25</sup> Heitman, pp. 71-197, 219-222, 267-305; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>26</sup> Heitman, p. 197.

<sup>27</sup> Heitman, pp. 213, 235, 267-270, 279; Legum, ACR, 1977-1978, pp. B229, B378; Ofcansky (Ethiopia), p. 313; Spikes, pp. 275, 302.

<sup>28</sup> Nazario, pp. 109-110. Some evidence suggests that Cuban generalship may have been considerably better than Soviet generalship. First, the Soviets directed the three disastrous FAPLA campaigns of 1985-1987. Second, FAPLA defenses were crumbling around Cuito Cuanavale until Castro sent in Cuban combat units and demanded that direction of the campaign be turned over to his generals, at which point the SADF was stopped cold. In addition, Brigadier General Rafael Del Pino of the Cuban Air Force, who defected to the United States in 1987 in part because of his opposition to the Angola war, claimed that the Cuban officers recognized that their Soviet counterparts were incompetent and constantly argued for alternative, more aggressive strategies. While Del Pino's claims may be biased, they do conform to other evidence that Cuban commanders urged more dynamic actions than the Soviets. See Nazario, pp. 109-110.

<sup>29</sup> James, p. 258; and author's interviews with Lt. General Bernard Trainor, May 1994, and Jorge I. Domínguez, July 1995.

<sup>30</sup> Heitman, pp. 235, 261.

(and armed services). Cuban formations of all sizes generally evinced thorough integration of all combat elements into effective combined arms teams. In Ethiopia and again in Angola, Cuban armor, mechanized infantry, infantry, engineers, helicopters, and fixed-wing aircraft worked extremely well together. In Angola in particular, the thick vegetation of the bush made it essential for dismounted infantry to work together with armor to take advantage of the strengths and cover the weaknesses of each arm. Discrete Cuban units also did a good job working together and supporting each other in combat. In particular, the success of the large-scale Cuban maneuvers in all of their wars were possible only because of the ability of geographically removed Cuban units to coordinate their actions in pursuit of broader objectives. Finally, the Cuban Air Force (DAAFAR) did a good job supporting Cuban ground forces. This was especially evident in Angola in 1987-1988 when ubiquitous Cuban and Angolan close air support and battlefield air interdiction missions made it very difficult for the SADF's maneuver units to move or its artillery to set up and fire.<sup>31</sup>

Based on limited information, DAAFAR appears to have performed well in both ground-to-air and air-to-air operations. Cuban MiGs and SAMs quickly established air superiority over Ethiopia in 1978 and Angola in 1987-88, although both the Somalis and South Africans had had undisputed command of the air prior to their arrival. While South African accounts swear up and down that they were not afraid of the Cuban MiGs, the fact is that the SAAF's Mirage IIIs and Mirage F-1s were swept from the sky by the combination of the Cuban SAMs and MiG-23s. Indeed, so fearful were the South Africans of Cuban air defenses that in 1987 they completely revamped their airstrike tactics to emphasize quick, low-altitude flight routes and toss-bombing, resulting in less accurate attacks. Indeed, throughout 1987 and 1988 the SAAF had to go through all sorts of contortions to execute its operations without heavy casualties and yet it still lost as many as 22 planes. Little information is available regarding Cuban/South African dogfights, and what is available is from the (notoriously skewed) South African perspective. Nevertheless, even these accounts admit that Cuban pilots were very "aggressive and clever" and concede that they lost several of the handful of engagements they admit took place.<sup>32</sup>

The Cuban record in air-to-ground operations is a bit murkier, but here as well the Cubans appear to have performed at least adequately. The accuracy of Cuban airstrikes varied greatly. As in most air forces, Cuban pilots did better when attacking stationary targets--such as the Calueque dam--and ground forces moving across open terrain--such as in the Ogaden--but did not fare as well against ground forces in heavy vegetation--such as in the thick Angolan bush. Nevertheless, even against the South Africans in Angola, Cuban air-to-ground operations were paralyzing. The SADF constantly had to invent schemes to divert or confuse the Cuban and Angolan MiGs to allow them to conduct ground operations without interference, but these ploys rarely worked. Ultimately, an important factor that prompted the South Africans to call off their attack on Cuito Cuanavale was that Cuban aircraft increasingly were able to concentrate their strikes against South African supply lines and bases, threatening the SADF's logistical lifeline.<sup>33</sup> Although Heitman maintains that Cuban and Angolan MiGs did little actual damage, he acknowledges that, "What they did achieve was to hamper South African operations quite considerably. It would not be going too far to say that on several occasions it was only the timely arrival of MiGs over a battlefield that prevented the complete destruction of a

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<sup>31</sup> Heitman, esp. pp. 302-305; Lewis, pp. 99-110; Spikes, pp. 260-307; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>32</sup> Quoe is from Heitman, p. 318. Also see Dougherty, p. 32; Fermoselle, p. 407. Harding, p. 24; Heitman, pp. 71, 79, 198, 310-320; IISS, *Strategic Survey, 1986-1987*, p. 189; James, pp. 215-219, 232; Somerville, pp. 154-156.

<sup>33</sup> Dougherty, p. 35; Harding, p. 57; Heitman, pp. 143, 177, 196, 200, 211-212, 227, 250-252, 264-265, 279, 306, 310, 346; Valdés, p. 61; and author's interviews with Lt. General Bernard Trainor, May 1994.

FAPLA brigade."<sup>34</sup>

Cuban unit cohesion was good but not great. In Angola in 1975 the first real impact of Cuban forces was to stiffen MPLA resolve and demonstrate to the South Africans that Angola would not be a "walkover" for them. MPLA units regularly disintegrated under any real pressure from either the SADF or the FNLA, however, while the first small Cuban contingents were repeatedly outflanked and forced to retreat, they never broke and ran. Moreover, in all three of these campaigns, there are no recorded instances of Cuban units falling apart under pressure, even in the bleakest moments along the Queve river in 1975, at Harer in 1977, or at Cuito Cuanavale in 1987.<sup>35</sup> Still, Rafael Fermoselle notes that neither did Cuban units doggedly defend their positions. For the most part, Cuban units rarely fought to the death and preferred to give up a position and retreat than to sacrifice themselves defending it.<sup>36</sup> This is not necessarily an indictment of Cuban courage, and may well reflect the perceptiveness, initiative and quick-thinking of Cuban junior officers who recognized when a position was untenable and preferred to pull their troops out rather than have them needlessly killed or captured.

Cuban forces also did reasonably well in the area of logistics. Cuban units never suffered from a lack of supplies, even when conducting fast-paced operations over great distances--such as in Ethiopia--or in extremely difficult terrain--as in Angola.<sup>37</sup> Lt. General Bernard Trainor, who observed Cuban operations in Angola in 1987-1988 as a war correspondent, commented that Cuban logistics operations were very impressive, and in some ways even rivaled US logistical feats during the Persian Gulf War. In particular, General Trainor noted that Cuban quartermasters reflected the aggressiveness and daring of their operational counterparts by establishing forward supply points well ahead of their troops to anticipate their advances.<sup>38</sup> In addition, the Cubans demonstrated real imagination and determination in moving forces over long distances when the need arose. The redeployments to Angola in 1975, Ethiopia in 1977, and to southeastern Angola in 1987 were very impressive, moving thousands of Cuban troops and their equipment over thousands of miles in very short periods of time. Although the Soviets often provided help for these redeployments, the initial airlift to Angola was a wholly Cuban enterprise and Havana pressed into service warships, merchant ships, fishing boats, and an assortment of private craft as well as ancient Bristol Britannia transport aircraft which had to land to refuel three times to make the trip across the Atlantic.<sup>39</sup>

Maintenance and repair appears to have been a particular strength of Cuban forces. In the 1970s when Cuba had only small numbers of heavy weaponry, Havana made a major effort to keep this equipment operational and so imposed high maintenance standards on its troops. These standards continued to hold even into the late 1980s after the Cuban arsenal had expanded considerably. In 1979, the US Defense Intelligence Agency concluded that Cuban forces were fully capable of all major repair and overhaul on all but their most sophisticated equipment, such as the latest Soviet electronic warfare gear.<sup>40</sup> At least two additional pieces of evidence suggest the Cubans were quite good in this area. First, in 1987-1988, Cuban and Angolan MiGs, which were maintained and repaired by Cuban technicians, flew tremendous numbers of sorties. Heitman remarks

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<sup>34</sup> Heitman. p. 328.

<sup>35</sup> Bainwooll, pp. 233-235; Spikes, pp. 240, 247, 270-271; and author's interviews with Jorge I. Domínguez, July 1995.

<sup>36</sup> Fermoselle, pp. 10-11. Fermoselle sees this as another Cuban cultural trait and finds evidence for this kind of behavior throughout the entire history of Cuban armed forces.

<sup>37</sup> See for example, Bereket Habte Selassie, *Conflict and Intervention in the Horn of Africa*, (NY: Monthly Review Press, 1980), p. 142.

<sup>38</sup> Author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>39</sup> See for example Fermoselle, pp. 401-402.

<sup>40</sup> DIA, chapter 2., pp. 30-35, chapter 4, p. 5.

that the MiGs were "constantly in the air," and that Cuban and Angolan pilots flew nearly 3,000 combat sorties between August 1987 and April 1988.<sup>41</sup> While it is unclear how many aircraft were involved in these operations (perhaps 30-60 aircraft), this level of sustained activity in combat, in the inhospitable environment of the Angolan bush, still suggests an impressive repair and maintenance capability. Second, Cuban technicians and technical advisers were employed by numerous Third World allies of the USSR, including many of the Arab states. In particular, before the 1973 October War, the Syrians found themselves incapable of maintaining some of their new Soviet hardware, such as T-62 tanks, and so Cuban technicians were brought in to man the Syrian repair and maintenance depots. Clearly then, Cuban technicians were at least considered significantly more capable than Arab technicians.<sup>42</sup>

Finally, the Cubans appear to have paid careful attention to operational security and emissions control. This was particularly apparent in Angola in 1987-1988, where the introduction of Cuban combat units to the fighting at Cuito Cuanavale also meant a sudden drop in the abilities of South African signals intelligence and direction finding units to provide accurate information regarding the location and intentions of their adversaries.<sup>43</sup>

Although Cuban forces generally performed quite well in combat, they were hardly perfect. Several elements of military operations stand out as areas of weakness. First, extremely limited information suggests that Cuban forces did not fare well in counterinsurgency operations. Unfortunately it is unclear exactly why this was the case, except that some sources claim that Cuban forces refused to adopt a counterinsurgency strategy in Angola and instead tried to use conventional military tactics against UNITA guerrillas.<sup>44</sup> If true, they certainly would not have been the first or the last to make this mistake. Second, Cuban soldiers and weapon crews do not seem to have been terribly good shots. In Angola in 1987-1988, this failing was particularly evident as Cuban units fired tremendous amounts of ordnance at close ranges and often into the flanks or rear of SADF units and yet scored few hits. In part this can be excused by the difficult terrain, and in part by the inferior equipment of the Cubans (discussed in greater detail below), but ultimately these are only partial explanations. It is still the case that South African units regularly outshot Cuban units, even when the Cubans had gained an advantage through maneuver or positioning.<sup>45</sup>

### **The Caliber of Cuban Opponents**

The fairly high quality performances turned in by Cuban troops between 1975 and 1988 cannot simply be written off as the result of fighting against incompetent adversaries. The skills of Cuba's opponents varied widely yet Cuban units performed well in every case, achieving sweeping victories over less-capable foes and stalemates or narrow victories over more-capable ones. At the low end of the spectrum were the FNLA forces which, even with a healthy leavening of Portuguese paratroopers and European mercenaries, were still nearly useless (although some of the Zairian units supporting them were considered marginally competent). UNITA's conventional forces were likewise of low quality and posed little threat to the Cubans when operating as conventional formations. The Somali armed forces, on the other hand, were fairly good. Somali forces were very skillful in rapid, maneuver operations and could handle both armor and jet fighters reasonably well. Most experts on the Ogaden War consider the Somali offensive

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<sup>41</sup> Heitman, pp. 229 and 328.

<sup>42</sup> Jerry Asher with Eric Hammel, *Duel for the Golan*, (NY: William Morris and Co., 1987), p. 54; Fermoselle, pp. 346, 397; J. M. Moreaux, "The Syrian Army," *Defence Update*, No. 79, March 1986, p. 42.

<sup>43</sup> In particular, see Heitman, p. 204.

<sup>44</sup> Del Aguila, p. 132; James, p. 231; Nazario, p. 107.

<sup>45</sup> See for example Heitman, pp. 128; 209, 304.

in 1977 to have been a very impressive series of operations.<sup>46</sup>

Of course Cuba's most capable opponent was the South African Defense Force, both in 1975-1976 and 1987-1988. South African forces were considered superb units by any measure and probably were the finest light mechanized formations in the world between 1975 and 1988. South African troops were highly professional, well-trained, and equipped with a mix of weapons specifically procured or designed for the terrain of southern Africa. In particular, the 32nd Buffalo Battalion was considered one of the elite units of the SADF and the Cubans fought against it constantly in the 1970s and 1980s.<sup>47</sup> Nevertheless, even against the South Africans the Cubans turned in a very creditable performance.

### **The Composition of Cuban Forces**

Nor was it the case that the Cuban units who participated in these campaigns were the elite of the Cuban army. With one exception, Cuban units deployed to Africa were regular, line formations. This exception was the 50th Division which saw action at the Calueque dam in 1988. The 50th Division was probably elite in the sense that it was composed of picked troops and received special training and possibly equipment. It almost certainly did not receive any special forces-type training or other considerations that would have made it a wholly different entity than the other Cuban units in Africa. In support of this supposition it should be noted that the Cubans at Cuito Cuanavale did not perform noticeably worse than the 50th Division at Calueque dam.

Cuban units and personnel chosen for deployment to Africa were not selected for their superior abilities. In the initial intervention into Angola in 1975, the Cubans hoped to minimize friction with the Angolans and so race was the major criterion for deployment to Angola. Black Cubans accounted for all of the initial contingents sent and eventually comprised over half of the total Cuban force there, far greater than their representation in the Cuban military more generally or in the population as a whole. Furthermore, the majority of Cuban troops sent to Africa were reservists, and nearly 80 percent of the Cuban soldiers who served in Angola were reservists mobilized specifically for these campaigns. The composition of forces in Ethiopia probably was very similar since most of the troops who participated in that operation were drawn from the expeditionary force in Angola.<sup>48</sup>

Finally, by the 1980s, service in Africa had lost its allure and so morale among Cuban troops in Angola had declined considerably. Volunteers for service in Africa dropped sharply in the early 1980s and Havana was forced to shorten the tour of duty from three years to two to attract any volunteers at all. Although ambitious officers tended to see it as a necessary evil on the road to promotion, service in Angola was more generally considered a form of punishment. Young trouble-makers were threatened with being drafted and sent to Angola. Likewise, older men often were mobilized and sent to Angola as punishment for misdeeds of all kinds.<sup>49</sup> Phyllis Greene Walker concluded that by the late 1980s, Cubans considered Angola a "Dumping ground for deviates."<sup>50</sup>

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<sup>46</sup> Legum, *ACR, 1977-1978*, pp. B225-228; Lewis, pp. 99, 110-112; Ofcansky (Somalia), pp. 182-184; William G. Thom, "Sub-Saharan Africa's Changing Military Capabilities," in Bruce E. Arlinghaus and Pauline H. Baker eds., *African Armies: Evolution and Capabilities*, (Boulder, Co; Westview, 1986), p. 103.

<sup>47</sup> Copson, pp. 120-121; James, p. 166.

<sup>48</sup> Bainwoll, p. 232; Jorge I. Domínguez, "The Cuban Armed Forces, the Party, and Society in Wartime and During Rectification (1986-1988)," *The Journal of Communist Studies*, Vol. 5: No. 4, Dec. 1989, p. 50; Fermoselle, pp. 417-418; Spikes, p. 203; Walker, p. 279; and author' interviews with Jorge I. Domínguez, July 1995.

<sup>49</sup> Bainwoll, p. 235; Del Aguila, p. 136; Domínguez, "The Cuban Armed Forces, the Party, and Society in Wartime and During Rectification (1986-1988)," p. 51; Fermoselle, pp. 307, 417.

<sup>50</sup> Phyllis Greene Walker, "The Cuban Military Service System: Organization, Obligations, and Pressures," in Suchlicki ed., p. 116.



Eventually, these practices led to morale problems and then to large-scale desertions in 1987 and 1988.<sup>51</sup>

### **Decisive Factors in the Cuban Military Campaigns in Angola and Ethiopia**

Against the FNLA in 1976 and the Somalis in 1978, Cuban forces had every advantage, hence their effortless victories. Havana's generals devised imaginative and effective operations that placed their opponents at a disadvantage through superior intelligence, deception and maneuver. Cuban forces were superior in aerial combat and mobile armored warfare, primarily because of the high levels of initiative, innovation, and flexibility of their pilots and tactical commanders. Likewise, right down to the lowest level, Cuban forces benefited from a thorough integration of their forces into combined arms teams and a rigorous attention to intelligence gathering and operational security that gave them an "information" advantage over their adversaries. The Cubans also were better able to sustain their forces in battle, even in difficult terrain or during rapid advances over long distances. Cuban troops handled their weaponry considerably better than their Angolan and Ethiopian foes, demonstrating an ability to employ far more of their equipment's capabilities than could their opponents. This gave them a further advantage in tactical engagements that in turn translated into broader victories.

Other measures concerning the material balance also contributed to Cuban victories. At least against the Somalis, Cuban forces (when combined with their Ethiopian allies) enjoyed a numerical superiority of 2:1 or even 3:1, although in categories of major equipment such as tanks, artillery pieces and combat aircraft the force ratios were probably more even.<sup>52</sup> Against the FNLA it is almost impossible to determine force ratios. The one occasion for which it is possible to make a rough estimate is the Battle of the Bengo river, in which the combined Cuban-MPLA-Katangan army was probably at most equal to the size of the FNLA-Portuguese-Zairean-mercenary force, and may have been considerably smaller. On the other hand, the Cubans may have had a slight advantage in tanks, artillery and other weaponry.<sup>53</sup> The quality of the weaponry was roughly equal in both of these wars. Against the FNLA Cuba fielded World War II- and 1950s-generation Soviet weaponry, while their opponents mostly employed Western equipment of the same time periods. In Ethiopia, because the Somalis had been armed and trained by the Soviets up to 1977, both sides used the same equipment: T-34s and T-55s, early model BTRs, MiG-21s (although the Ethiopians did have a squadron of US F-5s), etc.<sup>54</sup>

### *Decisive Elements in Cuban-South African Battles, 1987-1988*<sup>55</sup>

Perhaps the best way to examine the Cuban-South African conflict in 1987-1988, is to first discuss the South African campaigns against FAPLA that preceded it. The one real advantage FAPLA forces had over the South Africans was that they were considerably larger than the SADF contingent in southeastern Angola. In addition, FAPLA commanders were reasonably flexible and aggressive and fairly willing to take independent action or improvise responses to tactical situations, but these abilities could

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<sup>51</sup> Domínguez, "The Cuban Armed Forces, the Party, and Society in Wartime and During Rectification (1986-1988)," pp. 50-51; Fermoselle, p. 418.

<sup>52</sup> Dougherty, pp. 34-35; Legum, *ACR, 1977-1978*, pp. B225-228; Legum and Lee, pp. A44-45; Ofcansky (Somalia), pp. 181-183, 185-186; Somerville, p. 136; Valdés, pp. 54-58.

<sup>53</sup> González, p. 63; James, p. 69; Spikes, pp. 260-261;

<sup>54</sup> González, p. 63; Legum, *ACR, 1977-1978*, p. B235; Legum and Lee, p. A45; Ofcansky (Somalia), pp. 184; Selassie, pp. 121, 142; Somerville, p. 136.

<sup>55</sup> Unfortunately, very little information regarding Cuban-South African combat in 1975-1976 exists in English (although according to Jorge Domínguez the Cuban military has written several very detailed accounts of its campaigns there). Consequently, I was unable to draw any conclusions regarding the factors that decided the course of the fighting south of Luanda in 1975-1976.

not compensate for their more significant problems.<sup>56</sup> Specifically, FAPLA units were slow and cumbersome, in part because of their heavy equipment and in part because they simply did not do anything quickly.<sup>57</sup> FAPLA units also had tremendous difficulty coordinating their operations and bringing geographically disparate units together for support of larger offensive operations. Combined arms was very uneven among FAPLA units, with some formations showing a reasonably good integration of infantry, artillery, armor, and engineers and others displaying none whatsoever.<sup>58</sup>

FAPLA troops handled their equipment poorly with the result that, in firefights with the SADF, they were quickly defeated by the greater lethality of South African fire. FAPLA equipment also was not very well suited to the environment: the Soviet weapons they fielded were developed for European battlefields, not the south African bush. In particular, the Angolans suffered because they lacked quick, rugged armored vehicles with enough firepower to knock out other armored vehicles. FAPLA basically had only T-55 tanks--which were mechanically unreliable, difficult to maneuver in rough terrain, and very cumbersome to manipulate in the quick, chaotic firefights that characterized this war--or else BTRs and BRDMs--which were too lightly armed and armored to be able to slug it out with the various South African armored cars that were the heart of SADF mechanized formations.<sup>59</sup>

Perhaps the greatest imbalance between FAPLA and the SADF was in artillery. South Africa deployed G-5 and G-6 howitzers (the G-6 is the self-propelled version of the G-5), probably the finest artillery pieces in the world, and their crews were outstanding. Although FAPLA had some fairly good guns of its own, such as the Soviet 130 mm. M-46, their crews were mediocre at best. As a result, FAPLA artillery normally was quickly silenced in counterbattery duels with the South Africans, at which point the G-5s would tear apart FAPLA maneuver units. This advantage in artillery may have been the single most important element of the repeated, easy victories of the SADF over FAPLA.<sup>60</sup>

Another huge problem for FAPLA was South Africa's advantages in the intelligence war. FAPLA operations consistently suffered from appalling operational security with the result that SADF electronic intelligence elements regularly had a superb understanding of the disposition and plans of FAPLA forces. On the other hand, FAPLA rarely had a good understanding of the location or activity of SADF forces. To their credit, FAPLA forces patrolled frequently, but their reconnaissance usually only provided a sense of the forwardmost positions of the South African formations because FAPLA patrols often were discovered and driven off quickly by SADF security screens. Aerial reconnaissance--conducted by Cuban-piloted MiGs--usually revealed little because the South Africans were expert at concealing themselves in the thick vegetation. On the other hand, the SADF was very good about maintaining their own operational security and emissions control with the result that FAPLA, and its Cuban and Soviet advisers, could discover little from technical intelligence regarding South African forces.<sup>61</sup>

Finally, FAPLA forces were greatly hindered by poor unit cohesion. By 1987, many FAPLA soldiers were unenthusiastic about the 12-year old counterinsurgency campaign against UNITA. Most were terrified of the South Africans, who had defeated

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<sup>56</sup> On the respectable performance of FAPLA tactical commanders see, Heitman, pp. 44, 73, 75-78, 103, 151, 161, 197, 209, 222, 231-232, 249, 260-262; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>57</sup> Herbst, p. 145.

<sup>58</sup> Heitman, p. 38; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>59</sup> Heitman, entire, esp. see pp. 209, 212, 233.

<sup>60</sup> Heitman, pp. 230-233, 249-250, 344; IISS, *Strategic Survey, 1987-1988*, p. 194; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>61</sup> Heitman, pp. 35, 171, 177, 200-201, 218, 221, 226, 253; and author's interviews with Lt. General Bernard Trainor, May 1994.

them handily in countless engagements in the past. In addition, there were frictions between the Angolans and their Cuban and Soviet advisers, as well as frictions between the Cubans and Soviets themselves, further eroding morale. As a result, FAPLA units generally disintegrated under any sort of moderate pressure. Even when in good defensive positions, it was often the case that FAPLA units would fire madly for the first hour of combat and then dissolve into a mass of surrenders and desertions. Any sharp blow from the South Africans was usually enough to crack a FAPLA position, while successful flanking maneuvers usually resulted in sweeping victories for the SADF.<sup>62</sup>

Cuban performance can be best assessed in comparison with FAPLA performance. The Cubans did better against the SADF because they had a number of strengths FAPLA did not and lacked some of FAPLA's most important weaknesses. However, Cuban achievements against the South Africans were still somewhat limited because the Cubans did suffer from some of the same problems as FAPLA, and because the SADF was simply a first-class army.

While FAPLA leadership was not terrible, Cuban strategic and tactical commanders were far better in terms of their flexibility, creativity, initiative, and willingness to maneuver in battle. Indeed, in these areas, they generally seem to have been at least the equals of their South African counterparts (and probably better than their Soviet mentors). As a result, the SADF was faced with a foe more able and willing to react quickly to its moves and maneuver against it battle than was FAPLA. Cuban artillery units were not quite the equal of the South African batteries, but were good enough to "shoot-and-scoot" to avoid being silenced by the G-5s, and even to duel them to several draws. Of equal importance, despite their morale problems, Cuban troops had considerably better unit cohesion than their FAPLA allies with the result that the South Africans really had to fight to dislodge Cuban units rather than simply making a move and watching the enemy fall apart. Thus when SADF units came up against the Cubans in late 1987 they encountered an adversary that was active, aggressive, reactive, and determined, making for a completely different calculus of battle.<sup>63</sup> Indeed, after their second attack on Cuban positions along the Tumpo river failed on 29 February 1988, one of the South African task force commanders remarked simply that, "the enemy is strong and clever."<sup>64</sup>

The intelligence balance in southern Africa also shifted noticeably with the arrival of Cuban forces. The Cubans were more attentive to passive intelligence gathering such as listening and observation posts and Cuban patrols were more aggressive than FAPLA reconnaissance. In particular, Cuban patrols were not easily driven off by South African security screens with the result that they were often able to penetrate deeper into South African territory to get a better feel for SADF order of battle and intentions. Likewise, Cuban operational security and emissions control were much better than FAPLA's, greatly diminishing the SADF's understanding of their operational situation. Consequently, after Cuban combat formations began arriving at Cuito Cuanavale, South African forces were less and less able to surprise their adversaries and more and more often were themselves surprised by the Cubans.

Cuba had two important advantages over the South Africans that must be accounted for when assessing their performance. First, was their numerical superiority over the SADF forces. At Cuito Cuanavale, the Cubans disposed of roughly 4-8,000 combat troops, supported by probably another 10-15,000 FAPLA troops. Against them the South Africans had 7-9,000 men in southern Angola, of which about 3,000 participated in the assault on Cuito Cuanavale. Another 6-10,000 UNITA troops

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<sup>62</sup> See for example, Heitman, pp. 210, 213, 230, 249-251.

<sup>63</sup> Heitman, pp. 204-205.

<sup>64</sup> Heitman, p. 261.

probably also took part in the battle.<sup>65</sup> At the Calueque dam, Cuban numerical advantages may have been even greater: roughly 15,000 Cuban troops were in the area, and a considerable percentage of these--perhaps as many as one-third to one-half--appear to have participated in the fighting against 3,000 South Africans.<sup>66</sup> While these force ratios may not necessarily have been overwhelming, it often allowed the Cubans to rely on masses of men, equipment, and firepower to compensate for South African skills.

Cuba's second advantage was its relative command of the air. Clearly, this superiority was closely related to Cuban military effectiveness because an important part of their control of the air over the battlefield derived from the skill of their fighter pilots, radar operators and air defense crews. Nevertheless, Cuban ground forces benefited greatly from air superiority. First, the threat of SAAF air attacks, which had been crippling for FAPLA operations in 1985 and 1987, was dramatically reduced. Second, SADF forces were prevented from moving around the battlefield at will, greatly restricting the mobility that had been one of their greatest assets in previous campaigns. Finally, Cuban airpower silenced the G-5s, allowing Cuban artillery to play a greater role in the ground fighting than had ever before been the case, and diminishing the most deadly threat to Cuban ground units.

Nevertheless, the Cubans too were plagued by some of the same problems that afflicted FAPLA. In particular, since the Cubans used largely the same equipment as FAPLA, their equipment was equally unsuited to the South African bush. Cuba's reliance on old Soviet armored vehicles such as T-55 (and some T-62) tanks, BTR-50s and -60s, BRDMs, and towed artillery, left their formations slow and cumbersome. Cuban troops and commanders regularly acted and reacted more quickly than their vehicles could. Thus Cuban units regularly counterattacked and pursued defeated SADF forces almost immediately, but rarely could catch the South Africans because their vehicles could not keep pace with the South African light armor. Likewise, brilliantly conceived Cuban envelopments caught nothing because they were not able to close the trap in time. Another real problem for the Cubans was the clumsiness of Soviet tanks in combat. The 100 mm. gun on the T-55 could do real harm to South African armored cars if it could hit them, so to prevent this, the South Africans relied on "swarming tactics" in which many armored cars would dart around the tanks, taking multiple shots against them, and then ducking back into cover more quickly than the cumbersome Soviet tanks could react and shift their fire. Eventually, the Cubans answered this tactic by deploying large numbers of RPG-equipped infantry with their tanks to keep the SADF armored cars at bay, but this was an imperfect solution as it did not allow the Cuban tanks to close with and destroy the South African armored cars.<sup>67</sup> The superior marksmanship of SADF troops over their Cuban counterparts only added to these problems.

### **Summary of Cuban Military Performance, 1975-1988**

Overall, the Cubans performed quite well in combat in Angola and Ethiopia. Against mediocre opponents they achieved sweeping victories. Against the formidable South Africans they mostly held their own and in some cases won impressive victories. To some extent, Cuban forces needed quantitative advantages to offset South African superiority in weaponry and weapons handling. Nevertheless, this still should not detract from the skill of Cuban strategic and tactical leadership in combat against the SADF.<sup>68</sup>

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<sup>65</sup> Heitman, pp. 32-34; James, pp. 173, 175-176; Nazario, p. 108. Also see Domínguez, "The Cuban Armed Forces, the Party, and Society," p. 50.

<sup>66</sup> Heitman, pp. 297, 302.

<sup>67</sup> Heitman, pp. 202-305; and author's interviews with Lt. General Bernard Trainor, May 1994.

<sup>68</sup> For concurring views of Cuban prowess, see Bainwooll, p. 233; Del Aguila, p. 43; Domínguez, "The Cuban Armed Forces, the Party, and Society," pp. 47-48; James, pp. 71-72, 74, 76-78; Heitman, pp. 209, 261; Papp, p. 183; and author's interviews with Lt. General Bernard Trainor, May 1994.

**Table 14a. Predictions of the Soviet-Model Theory Compared to Arab Military Effectiveness 1945-1991 and Cuban Military Effectiveness 1975-1988.**

Prediction	Soviet-Model Theory	Cuban Performance	Arab Performance
Tactical creativity	<b>Poor</b>	Good	<b>Poor</b>
Strategic creativity		Good	Uneven
Information flows		Good	Poor
Tactical initiative	<b>Poor</b>	Good	<b>Poor</b>
Strategic initiative		Good	Uneven
Centralization/Delegation	<b>Poor</b>	Adequate	<b>Poor</b>
Simplicity of Chain of Command		Adequate	Uneven
Tactical use of maneuver	Good	Good	Poor
Strategic use of maneuver	Good	Good	Uneven
Employment of armor	<b>Poor</b>	Adequate	<b>Poor</b>
Employment of artillery	Uneven	Adequate	Poor
Air-to-air combat skills	<b>Poor</b>	Adequate	<b>Poor</b>
Air-to-ground operations	<b>Poor</b>	Adequate	<b>Poor</b>
Ad hoc operations	Good	Good	Poor
Set-piece operations	Good	Good	Adequate
Combined arms	Good	Good	Poor
Unit cohesion		Adequate	Good
Personal Bravery		Adequate	Good
Maintenance and repair	Good	Good	Poor
Assimilation of equipment		--	Poor
Logistics	Good	Good	Uneven
Combat engineers	<i>Good</i>	<i>Good</i>	<i>Good</i>
Technical support	Good	--	Poor
Tactical intelligence	Uneven	Good	Poor
Strategic intelligence	Good	Good	Uneven
Operational Security	<i>Good</i>	<i>Good</i>	<i>Good</i>
Tactical leadership	<b>Poor</b>	Good	<b>Poor</b>
Strategic leadership		Good	Uneven
Ability to Plan and Execute Complex Operations	Good	Good	Uneven
Officer rotations		--	Unclear
Morale (at start of the war)		Uneven	Adequate
Attention to training		Good	Uneven
Emphasis of training		--	Adequate
Ability of soldiers to benefit from military training		--	Poor
Preferred operational tempo	Fast	Fast	Slow
Attention to offensive operations	Excessive	Excessive	Adequate
Attention to defensive operations	Poor	Poor	Adequate
Attention to air superiority	Good	Good	Uneven
Unit and service coordination		Good	Poor
Willingness to take casualties	High	--	Low

A blank square indicates the Soviet-model theory does not make any prediction in this category.

A double dash (--) indicates that inadequate information was available to make a judgment in this category.

Results in **bold** indicate categories in which Arab military effectiveness conformed to the predictions of the Soviet-model theory, at least superficially. Results in *italics* indicate categories in which Arab military effectiveness conformed to Cuban military effectiveness, at least superficially. The Soviet-model theory predicts that both Arab and Cuban military performance should conform to the patterns predicted by the theory. In other words, it predicts that there should be many lines on this chart where the results are in both italics and bold.

Of greatest importance for this study, Cuban forces performed far better than the Arab armies did from 1945 to 1991. The average Cuban formation was much more capable than its counterpart in "average" Arab militaries, and even was more capable than most Arab elite formations. For example, Cuban forces in Ethiopia and at Cuito Cuanavale had an incomparably better grasp of mobile armored warfare than Iraq's Republican Guards did at the end of the Iran-Iraq War. Cuban formations in the Calueque dam operations (probably from the elite 50th Division) fought at a level that even Jordanian forces in 1948 or Syria's commandos in 1982 never approached. Moreover, the problems that proved most damaging for the Arabs in battle (or even just for those Arab militaries that employed a Soviet model of operations) were not the same as those that proved decisive for the Cubans. In particular, Cuban capabilities in maneuver warfare, tactical leadership, generalship, and technical skills were among their greatest strengths, in contrast to all of the Arab armies in which these same categories were their greatest weaknesses.

### Conclusions

The results of the two parts of this test strongly affirm the initial conclusions drawn from the congruence tests in Part III, that reliance on a Soviet-style military system played only a rather minor role in the military ineffectiveness of Arab armed forces since 1945. The evidence shows very little change in Egyptian military effectiveness between 1973 and 1991, despite the extensive change in the influence of Soviet practices on Egyptian military operations. However, there was a considerable difference between the performance of Arab forces relying on Soviet military systems and the performance of Cuban military forces that also relied on Soviet military methods. For the most part, the difference was not in how operations were conducted, but how well those operations were conducted. Cuban forces seemed to rely on the same tactics and doctrine as the Syrians and Egyptians in the October War, but the Cubans were simply much more adept at implementing these practices.

In particular, the Cubans apparently saw much greater room for interpretation of Soviet doctrine than did the Arab armies (or some Soviets for that matter). Whereas the Arabs clung rigidly to the letter of Soviet doctrine, the Cubans were more willing to adapt its fundamental premises to the specifics of the situation. This demonstrates the central fallacy of the Soviet-model theory itself, that non-Soviet militaries employing Soviet doctrine will invariably implement Soviet methods in the exact manner the Soviets did and that those employing a Soviet model will do so no better and no worse than the Soviets themselves. As the Cubans demonstrate, armed forces relying on a Soviet model of military operations should not necessarily be expected to fight exactly as the Soviets did. The Soviet system, like any military "format," can be adapted and refined by a creative and independent-minded officer corps to suit their particular needs or predilections. Moreover, other armies are likely to have different strengths and weaknesses than the Soviets which the Soviet system is unlikely to be able to eradicate. Many countries around the world have adopted an American or British model of military operations, yet few actually fight in the exact same manner as American or British combat forces, and the Cubans demonstrate the same is true for the Soviet model.

In short, the evidence presented in this chapter shows that the Arab culture theory has incomparably greater explanatory power than the Soviet-model theory, and that the Soviet-model theory is itself badly flawed because there is nothing about the model itself that forces certain patterns of behavior. Rather different militaries respond to the introduction of Soviet practices differently, generally in keeping with preexisting institutions and patterns of behavior. Thus the Arabs employed Soviet methods in one way while the Cubans employed those same methods in other ways, and so came up with

very different patterns of military effectiveness. That these different patterns of military effectiveness reflected prior patterns of the same military more than they resembled the patterns of other armed forces relying on Soviet practices, demonstrates that the notion that Soviet doctrine imposes behavioral patterns on non-Soviet armies is specious.

Furthermore, it is my contention that reliance on a Soviet-style military system was not detrimental to Arab armed forces *per se*, but was actually quite comfortable for them, because some features of the Soviet military system conformed very closely to accustomed patterns of Arab behavior. Numerous authors have commented that the Soviet military system is characterized by overcentralization, the absence (or suppression) of initiative and innovation at lower levels of command, an emphasis on detailed planning, and the careful limitation of the decision-making of junior officers.<sup>69</sup> It is these similarities to patterns of behavior characteristic of Arab armies that appear to have led many to conclude that it was the reliance on Soviet methods that created the same problems in Arab armed forces. However, this study has revealed that this assumption is almost certainly wrong. Arab armed forces have manifested these tendencies regardless of whether they relied on Soviet methods, or even had any contact with the Soviets at all. One US military officer who has worked with the Jordanians specifically remarked that while he knew the Jordanian military system had no Soviet influence whatsoever, Jordanian military operations struck him as reminiscent of the Soviets.<sup>70</sup> This point suggests an alternative explanation: that the Soviet military system conforms closely to usual Arab practices because of similarities in the behavioral traits of the dominant Russian (or Soviet) culture and the dominant Arab culture.

Discussions of the Soviet military system, and of Russian/Soviet culture strongly support this notion. Although Russian culture and Arab culture were very different in many ways, they also shared a number of strong behavioral traits critical to military operations. For example, Christopher Donnelly writes that, "It is hard for a western officer to appreciate what a difficult concept [initiative] is to reconcile with a normal Soviet upbringing. There has never been a native Russian word for initiative."<sup>71</sup> A sociological study conducted in the 1970s that compared 3,000 recent Soviet immigrants with an American control group found that the Russians expected initiative, direction, and organization to come from higher authority, and ultimately from the supreme leader, to a far greater extent than the Americans.<sup>72</sup> Likewise, John Mearsheimer concludes that the absence of initiative and flexibility among Soviet military forces was "largely the result of powerful historical forces. Fundamental structural change in Soviet society and the Soviet military would be necessary before flexibility and initiative would increase significantly."<sup>73</sup> Thus it appears that the dominant Arab and Russian/Soviet cultures

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<sup>69</sup> Canby, Adelphi Paper 126; Erickson, "Soviet Ground Forces and the Conventional Mode of Operations; House, *Toward Combined Arms Warfare*; and Mearsheimer, pp. 183-188 and 193-198.

<sup>70</sup> Author's interviews with US military personnel, May 1993.

<sup>71</sup> Christopher Donnelly, "The Soviet Soldier: Behavior, Performance, Effectiveness," in *Soviet Military Power and Performance*, ed. John Erickson and E. J. Feuchtwanger, (Hamden, Ct: Archon, 1979), p. 115. Also see Christopher Donnelly, *Red Banner: The Soviet Military System in Peace and War*, (Alexandria, VA: Jane's Publishing Inc, 1988), p. 187. In addition, a much more enjoyable treatment of Russian culture, its impact on Soviet soldiers and on the Soviet military system in general can be found in Ralph Peters, *Red Army* (NY: Pocket Books, 1989). Peters is a US Army intelligence officer and this book is a novel of a hypothetical Soviet invasion of Western Europe, in which Peters hoped to convey an appreciation of the Soviet soldiers and officers themselves. As he explains, it was an effort to convey an understanding of Soviet military personnel that was impossible to give in formal briefings and lectures. As such, it purposely provides an interesting portrait of the various "human factors" including Russian culture, that shaped the Soviet military.

<sup>72</sup> Cited in Arthur Alexander, *Decision-Making in Soviet Weapons Procurement*, Adelphi Paper 147/8, (London: IISS, 1978/9), p. 28.

<sup>73</sup> Mearsheimer, p. 186.

shared similar notions that change and action should come from the top of a hierarchy and be transmitted downward, that subordinates should not exercise independent judgment; that creative approaches were generally to be avoided, and that all power should be concentrated in the hands of those at the top of a hierarchy. Consequently, it may well be that Egypt, Syria and other Arab states took to the Soviet system in large part because it was shaped by the forces of Russian/Soviet culture, which shares many characteristics with the dominant Arab culture, and therefore the Soviet military approach accords well with traditional Arab ways of doing things.

It may even be that reliance on Soviet methods is actually helpful to Arab militaries. The Soviets found crude but effective solutions to many of the problems resulting from their culturally driven values and behavior, solutions that became the central elements of the Soviet military system.<sup>74</sup> To the extent that Arab culture manifests many of these same behavioral traits, causing many of the same patterns of performance on the battlefield, then strict adherence to Soviet methods may actually be useful for Arab militaries. The Egyptian and Syrian experiences in 1973 offer some tentative support for this position. For the October War, the Egyptian and Syrian militaries adhered closer to a Soviet system than ever before. In particular, they adopted the Soviet method of scripting combat operations to obviate the need for junior commanders to act independently. The Egyptians and Syrians fought better in 1973 than they ever had before, and a major reason for this was their strict reliance on Soviet methods, especially scripting operations, which allowed them to avoid many of the problems they had previously experienced.

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<sup>74</sup> Donnelly, *Red Banner*, pp. 29-43, 195, 211.



## Chapter 15

### Testing the Politicization Theory Against the Arab-Culture Theory

Just as in the previous chapter I compared the Soviet-model theory to the Arab-culture theory, so in this chapter I compare the politicization theory to the Arab-culture theory to determine which better explains Arab military performance since 1945. I begin by briefly recapitulating the findings of the tests performed in Chapter 11 regarding the different variants of the politicization theory--praetorianism, commissarism, and palace guardism. Next, I examine the experience of the Iraqi military from 1969 to 1991, during which time Baghdad consciously depoliticized its military. This section therefore constitutes an instance in which culture remained (essentially) constant while politicization varied. The Iraqi case is a good one for this test because at different times over the last four decades, Baghdad's military has gone from a palace guard force, to a praetorian force, to a commissarist force, to a relatively non-politicized force.<sup>1</sup>

I then compare the experience of the Arab militaries in combat since 1945 with the experience of Argentine forces during the Falkland Islands War of 1982. In the early 1980s the Argentine military may have been the most politicized military in the world, suffering from particularly virulent strains of all three variants of the theory. Thus, this part of the chapter examines an instance in which culture is varied (by comparing Arab culture to Argentine culture), but politicization remains a constant for both. For this test, the Arab-culture theory would predict that there should be greater variance between the military effectiveness of the Arab armies and the Argentine armies than within the Iraqi military before and after the various depoliticizations. Specifically, the patterns of military effectiveness displayed by the Argentines should differ from those evinced by the Arabs from 1945 to 1991. Conversely, the politicization theory would predict greater variance in the Iraqi armed forces over the course of the postwar period than between the Arabs and the Argentines. In other words, Argentine forces not only should fight as poorly as the Arabs, but the categories of military effectiveness in which they had the greatest difficulty should be the same as those of the Arabs. This is a crucial prediction: it is not enough that the Argentines may have fought poorly, the politicization theory predicts that they will have the same weaknesses as the Arabs.

#### **The Politicization Theory and Arab Military History: A Recapitulation**

The three variants of the theory that Arab military ineffectiveness between 1945 and 1991 was a product of the politicization of Arab militaries enjoyed mixed results in the congruence tests conducted in Chapter 11. The commissarist variant of politicization did best by far. Commissarism seemed to rank third on the list of explanations for Arab military performance since 1945, behind the Arab-culture and underdevelopment theories. The predictions of the theory were strongly confirmed by the patterns of poor

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<sup>1</sup> Since the Gulf War, Saddam has reintroduced commissarism with a vengeance in response to the civil war, domestic unrest, and numerous coup attempts that followed the Coalition victory. See Michael Eisenstadt, "The Iraqi Armed Forces: Two Years On," *Jane's Intelligence Review*, March 1993.

Arab generalship as it was often the case that rotten Arab generals were the product of highly politicized systems in which the regime appointed loyal incompetents for fear of giving more capable officers positions of real authority. The various problems which commissarism created for senior leadership levels also had a lesser impact on more tactical levels of command, thus the predictions of the theory were at least partially fulfilled by the enormous problems Arab armed forces experienced among their junior officer ranks. Moreover, commissarism specifically predicted Arab problems with information management, intelligence gathering and analysis, unit and service coordination, and overcentralization across the board, as well as the debilitating rotational policies and chains of command employed by some of the Arab states. Commissarism's biggest problem was that its most important prediction was that poor strategic leadership would be the greatest hindrance to Arab armed forces while tactical leadership would only be a secondary problem. The evidence incontrovertibly demonstrated that tactical leadership was the Arabs' greatest problem and generalship only a secondary problem. In addition, commissarism made no predictions regarding the various problems Arab armed forces suffered because of their lack of technical skills and limited familiarity with machines, probably the second most debilitating weakness they experienced.

On the other hand, both praetorianism and palace-guardism fared poorly as potential explanations for Arab military performance. Not only did both of these variants of the politicization theory fail the test against the Null hypothesis, but they also failed to accurately predict Arab military performance more generally. The key problems identified by these explanations simply were not the greatest problems experienced by the Arab armed forces since 1945. In particular, although in some cases Arab forces suffered from morale problems and an inattention to training for conventional combat, there was no consistent pattern of such behavior nor were these the critical factors in Middle East wars.

### **Iraq, 1969-1991**

The experiences of Iraqi military forces on the battlefield between 1973 and 1991 tend to reinforce the various conclusions derived from the congruence tests. They lend further support to the notion that while commissarist politicization was an important aspect of Arab military ineffectiveness, it was not as important as behavioral patterns derived from the dominant Arab culture. In addition, they clearly demonstrate that the effects of praetorianism and palace-guardism were very limited.

#### **The Rise and Decline of Iraqi Praetorianism and Palace Guardism**

In the first few decades of the postwar era, the Iraqi armed forces suffered heavily both from palace guardism and praetorianism. After the military's role in the Rashid 'Ali coup during World War II, the British and the Iraqi monarchy reduced the armed forces to a small internal security force. They had little firepower, mobility, or logistical capabilities for operations against foreign foes and were responsible almost solely for keeping the peace and maintaining the Hashimites' grip over the fractious population. In 1958 the King was again overthrown by the military and this time the monarchy was abolished. For the next 11 years, the military ruled either unilaterally or at times with a civilian facade that usually was bloodily discarded after a short while. Changes in the regime primarily came as a result of coups from other elements of the military.

After the second Ba'thist takeover in 1969, however, praetorianism was gradually replaced by a ruthless commissarism as the civilian regime asserted its complete control over the military. General al-Baqr and, especially, Saddam Husayn were determined to prevent the military from ousting them as in 1963, and they took care to ensure that virtually all of the senior Iraqi commanders--often down to brigade level--were political

loyalists. Saddam executed defeated generals, suspected victorious generals, and regularly intervened in day-to-day military operations. Loyalty became the key to advancement in the Iraqi military, especially at the highest levels of command, and suspected disloyalty was frequently punished by death.

In addition, palace-guardism also receded as the regime created new paramilitary forces to handle internal security and Iraq's army increasingly was redirected toward the implementation of Baghdad's foreign policy. Saddam focused the attention of the military on external threats both because his foreign policy brought Iraq into open conflict with numerous states and because he wanted the military preoccupied with defending Iraq, so that it would not resume its previous interest in governing Iraq. Meanwhile, intelligence services and paramilitary organizations proliferated, assuming overlapping responsibilities. Not only did these institutions alleviate the need for the military to defend the regime against internal threats, but many were set as watchdogs to make sure that the military itself did not move against the regime.

Despite this severe decline in praetorianism and palace-guardism, there was little improvement in Iraqi military effectiveness. Baghdad's legions continued to suffer from all the same problems they had in the past. It is extremely difficult to claim that the Iraqi formations that fought Israel in 1973 or that invaded Iran in 1980 were somehow better than those that fought Israel in 1948 and the Kurds in the 1960s. They may have been better armed, but they were no more adept at using their weapons or defeating their adversaries. In particular, there was absolutely no change in the crippling problems of tactical leadership that had plagued Iraqi units against Israel in 1948 and against the Kurds throughout the 1960s and 1970s. Indeed, if anything, the Iraqi forces that fought in 1973 and 1980 (and probably 1974-1975) appear to have been even worse than those which fought Israel in 1948. This demonstrates that palace-guardism and praetorianism were only minor problems for Iraqi forces, and that commissarism had a far more significant influence.

### **The Rise and Decline of Iraqi Commissarism**

After the disastrous showing by Iraqi forces in the first two years of the Iran-Iraq war, Saddam Husayn conceded that his heavy-handed commissarism was hurting Iraqi military performance. Beginning in 1982, Saddam removed many of the commissarist shackles on his army, resulting in an Iraqi military which was, briefly, one of the least politicized in the Arab world. Saddam removed many of his cronies from the ranks, and turned over all promotions, training, and planning to his most capable generals. Proven competence in battle became the foremost criterion for promotion and Saddam gave his commanders much greater leeway in conducting operations. Indeed, Saddam went so far as to recall to service competent junior officers who previously had been dismissed for suspected disloyalty.

The impact of this depoliticization was readily seen in a steady improvement in Iraqi performance. However, this improvement came almost entirely at senior levels of command. Iraqi forces fared better in combat after 1985 because the planning and conduct of operations by the Iraqi General Staff, corps commanders, and some division commanders improved dramatically. By contrast, as late as the Gulf War, Iraqi tactical formations continued to manifest the same patterns of ineffectiveness on the battlefield as they had at the beginning of the war--little initiative or innovation, an inability to conduct ad hoc operations, poor use of armor and artillery, inept air operations, a dearth of tactical maneuver, constant deception and obfuscation, awful combined arms coordination, and paltry technical skills throughout the military.

The primary reason for Iraqi success between 1987 and 1990 was that once Saddam lifted the political impediments on his generals, they were able to devise a method of operations that compensated for Iraq's tactical weaknesses. Iraq's high command expanded the elite Republican Guard and turned it into a force somewhat better able to prosecute modern armored operations. They brought better educated personnel

into the military (especially into the Republican Guard). They began to rely on scripted, rehearsed, set-piece operations. They created tremendous force imbalances in their favor at the point of attack, invested in a massive augmentation of Iraqi firepower, and employed chemical warfare on a vast scale. Nevertheless, these Herculean labors produced only a slight increase in Iraqi military effectiveness overall because they could only partially compensate for the persistent tactical weakness of Iraqi forces.<sup>2</sup>

This record argues that while commissarism was an element of Arab military weakness, it was not the most important factor. The fact that Iraq's tactical weaknesses persisted with little noticeable change long after depoliticization clearly indicates that commissarist politicization of the military was not their cause--or was at most a secondary influence. Similarly, the fact that the significant improvement in Iraqi strategic leadership resulted in only a modest improvement in Iraqi military effectiveness overall indicates that generalship was not the most important problem facing the Iraqi military. Still, Iraq's poor generalship was a considerable problem during the first two years of the war and the sudden improvement in this area after 1982-1985 demonstrates that it was principally a result of commissarism. Thus, as noted in Chapter 11, commissarism does appear to offer the best explanation for poor Arab generalship, but poor Arab generalship is only one aspect of Arab military ineffectiveness more generally, and not the most important aspect.

### **Argentine Military Effectiveness, 1982**

A comparison of Arab military performance with the Argentine military experience during the 1982 Falkland Islands War reveals significant differences in military effectiveness between Arab and non-Arab forces despite a common problem with politicization in all its various forms. Between World War II and the return of democracy after the Falklands War, the Argentine military was one of the most heavily politicized in the world. A military *junta* composed of the three service chiefs had ruled Argentina since 1976.<sup>3</sup> Moreover, the military leadership was deeply distracted from military issues by economic and social problems, and was riven by internal factions spawned by its handling of these domestic issues.<sup>4</sup> Despite the efforts of US military advisers and an exaggerated threat from Chile, Argentine military forces were wholly absorbed with internal security problems. The "Dirty War" against militant factions opposed to military rule had been the central focus of the military throughout the late

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<sup>2</sup> The identical pattern can also be found in the Egyptian military. Between 1967 and 1973, Nasser and Sadat went to great lengths to depoliticize the Egyptian military, believing this had been a major cause of defeat in the Six-Day War. By the October War, Egypt's senior military officers were highly competent and apolitical. As a result, Egyptian strategy and planning were significantly better in 1973 than in 1967. However, at tactical levels, the same problems of military ineffectiveness persisted, and ultimately, it was these limitations that led to Egypt's military defeat.

<sup>3</sup> Of course, this was only the most recent in a long series of military takeovers. Indeed, so bad was the politicization of the Argentine military that in 1962 the Army and Navy had actually fought a number of battles resulting in several thousand casualties to decide which would run the government. See John F. Guilmartin, Jr., "The South Atlantic War: Lessons and Analytical Guideposts--A Military Historian's Perspective," in James Brown and William Snyder eds., *The Regionalization of War*, (New Brunswick: Transaction, 1990), p. 60.

<sup>4</sup> Paul Eddy, Magnus Linklater, with Peter Gillman and the Sunday Times Insight Team, *The Falklands War*, (London: Andre Deutsch Ltd., 1982), p. 61; Katherine Swift Gravino and David R. Segal, "The Empire Strikes Back: Military Professionalism in the South Atlantic War," in Brown and Snyder eds., *The Regionalization of War*, p. 20; Guilmartin, p. 60; Juan Carlos Murguizar, "The South Atlantic Conflict--An Argentine Point of View," *International Defense Review*, February 1983, pp. 135-140.

1970s.<sup>5</sup> Moreover, the deep involvement of the Argentine military in politics instilled a deep fear of coups from other elements in the armed forces in the generals and admirals running the government. To ensure their grip on power, they imposed heavy loyalty requirements on the officer corps; punished capable, aggressive senior commanders; warped the command structure to limit the independence of their subordinates; and shot unsuccessful commanders for jeopardizing the legitimacy of the regime.<sup>6</sup> Thus, the Argentines suffered from heavy doses of all three of the variants of politicization that also afflicted the Arab states during the postwar era. Nevertheless, the performance of Argentine forces in the Falklands War did not show the same patterns of military ineffectiveness that characterized Arab operations since 1945.

### **Argentine Military Operations in the Falklands, An Overview**

On 2 April 1982 Argentina put teeth into its long-standing claims on the Falklands Islands by invading and seizing the capital and other principal points. The Argentines employed their best units and brought overwhelming force to the islands including a manpower advantage of over 30:1, plus air and naval support. Still, the operation was well-planned and competently conducted, and even the British were impressed by it. In particular, intelligence received by Buenos Aires at the last minute indicated that the British garrison in the Falklands was twice as large as the Argentines had originally believed, forcing a rewrite of the invasion plans. Despite this sudden revelation, the Argentines were able to put together a completely new plan in less than 24 hours, transmit it to the various units and implement it as planned.<sup>7</sup>

The only part of the invasion that did not go according to plan was London's response. The Argentines were stunned when the Thatcher government refused to abide by Buenos Aires' unilateral annexation of the islands and instead dispatched a very sizable (especially by the standards of the British armed forces of the time) battlefleet with an expeditionary force to retake the Falklands. The Argentines had expected the British to reluctantly acquiesce to their invasion and so had made no preparations for defending the islands against a major British military effort. Indeed, even long after the British began mustering their forces for war the Argentines still believed that they could avert war either through diplomacy or deterrence. Buenos Aires also was concerned about a possible attack by Chile--which alerted some of its forces after the Argentine invasion--and so the Argentines kept most of their best units back to defend against a Chilean attack. As a result, the Argentines did not deploy a very large force to defend the islands, they did not bother to fortify the islands, they made no effort to improve the Falklands' infrastructure to support military operations, nor did they stockpile military consumables in the event the British fleet blockaded the islands.<sup>8</sup>

After withdrawing the elite formations that had conducted the invasion, the Argentines started sending other units there from all over the country. They brought no armor, and little artillery, helicopters or motor transport. In addition, they did not bring materials for building barracks, even though the soft ground and harsh weather of the

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<sup>5</sup> Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War, Vol. III: The Afghan and Falklands Conflicts*, (Boulder, Co: Westview, 1990), p. 265; John Laffin, *Fight for the Falklands*, (NY: St. Martin's Press, 1982), pp. 74-75.

<sup>6</sup> Cordesman and Wagner, p. 264; Gravino and Segal, p. 20.

<sup>7</sup> Eddy, et. al., pp. 15-22; Lawrence Freedman and Virginia Gamba-Stonehouse, *Signals of War: The Falklands Conflict of 1982*, (London: Faber and Faber, 1990), pp. 103-116; Max Hastings and Simon Jenkins, *The Battle for the Falklands*, First Paperback Edition, (NY: Norton, 1983), pp. 73-91; Martin Middlebrook, *The Fight for the "Malvinas": The Argentine Forces in the Falklands War*, (London: Viking, 1989), pp. 16-34.

<sup>8</sup> Freedman and Gamba-Stonehouse, p. 326; Hastings and Jenkins, pp. 47-49; Rubén O. Moro, *The History of the South Atlantic Conflict: The War for the Malvinas*, Translated by Michael Valuer, (NY: Praeger, 1989), pp. 69, 81; Murguizur, p. 136.

Falklands made it very difficult to remain in the field for long. There was little rhyme or reason to their choice of reinforcements, and the final Argentine garrison was a bizarre hodgepodge of formations. Elements of three different army brigades from all over the country were sent to the islands: some units had no cold-weather clothing or training, others were sent without any of their heavy weaponry. Indeed, the 10th Mechanized Brigade was sent without its vehicles and with nothing heavier than some crew-served weapons such as medium mortars and light machine guns.<sup>9</sup>

By the time combat was joined between the two sides in early May, the balance of forces seemed weighted toward Argentina, but really favored the British. The Argentines had a slight numeric advantage in some categories. Argentina had roughly 13,000 military personnel on the islands with 42 105 mm howitzers, 4 155 mm howitzers, and 12 Panhard armored cars. The Argentine air forces boasted over 200 combat aircraft, and the Navy had 25 warships, including one old aircraft carrier. Against them, the British eventually massed 10-11,000 troops with 30 105 mm howitzers and 18 light tanks, 38 aircraft, and 51 warships including five nuclear attack subs and two modern vertical/short take-off and landing (VSTOL) aircraft carriers.<sup>10</sup>

These numbers were deceptive, however. In actuality, the Argentines had only 9 combat battalions on the island--as against 8 British combat battalions--and the rest of their troops were combat support, combat service support, occupation forces, and administrative personnel. Although Argentine troops had slightly more artillery than the British--and their handful of 155 mm guns proved very useful--the British howitzers were more modern and were backed by ceaseless fire-support from the 4.5 inch guns of their fleet. Helicopters proved to be a critical factor in the combat because the soft terrain of the islands made cross-country movement extremely difficult: the Argentines had only 26 while the British had well over 200. Less than a hundred Argentine aircraft had the range to reach the Falklands given Buenos Aires' very limited aerial refueling assets, and of these only 75-80 were actually committed to the fight, the rest being held back against Chile. Moreover, the best Argentine attack aircraft were its 30-40 A-4P Skyhawks--the earliest model of an obsolete plane--because its Mirage IIIs and Daggers (Israeli versions of the Mirage) were not optimal for long-distance ship-attack missions. Argentina had five Super Etendard naval-strike aircraft, but had received them only months before and had only five Exocet anti-ship missiles to use with them. Finally, the British fleet was vastly more powerful and more modern than the Argentine Navy, and its nuclear-powered attack subs (SSNs) alone kept the Argentine ships bottled up in mainland ports starting in early May. Thus, the material balance was at most even and probably favored the British by a significant margin.<sup>11</sup>

### *Initial Skirmishes*

The bulk of the British fleet arrived in the South Atlantic in late April, but was not yet ready to mount an invasion of the islands. Instead, the British feigned an assault in an effort to draw out the Argentine Air Force and Navy and destroy them in advance of any actual amphibious operations. This led to a series of naval and air engagements on 1-5 May. The Argentine Air Force (AAF) conducted strikes against British destroyers and frigates around the islands, impressing the British with their flying skills but doing only

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<sup>9</sup> Cordesman and Wagner, pp. 263-264; Freedman and Gamba-Stonehouse, p. 146; Middlebrook, p. 49; Moro, p. 76; Murguizur, p. 136.

<sup>10</sup> Cordesman and Wagner, p.p 261-262; Hastings and Jenkins, pp. 179, 318; Laffin, pp. 43, 48, 57, 77; Middlebrook, pp. 63, 142. Please note that my figure for the British aircraft includes only the Harriers deployed to the Falklands and operating from the *Invincible* and *Hermes*. I have not included the half-dozen or so Vulcan bombers that also conducted sporadic raids against Stanley airfield because their role in the fighting was negligible.

<sup>11</sup> Cordesman and Wagner, pp. 261, 312-313; Eddy, et. al., pp. 105, 194; Freedman and Gamba-Stonehouse, p. 326; Hastings and Jenkins, pp. 179, 318; Laffin, p. 57; Middlebrook, p. 64.

minor damage to the ships. On 2 May, the British sub HMS *Conqueror* sank Argentina's only cruiser, the aged *General Belgrano*. During the next two days Argentina's carrier task force located the two British aircraft carriers and tried to launch airstrikes against them, but poor weather prevented them from doing so, and eventually the threat from the British SSNs forced them to return to port. On 4 May Argentina's naval air force struck back at the British, sinking the brand-new destroyer HMS *Sheffield* with an Exocet missile launched from a Super Etendard as the destroyer stood picket-duty, guarding the fleet against air strikes. Although the two sides had sustained about equal damage in these clashes, the British were surprised by the abilities of the Argentines, and pulled back east of the islands to await the rest of their forces.<sup>12</sup>

In two dogfights on 1 May four British Harrier VSTOL fighters engaged four Mirages and Daggers, resulting in the loss of one Dagger and one Mirage. These engagements convinced the Argentines that trying to take on the highly-maneuverable Harriers armed with the advanced AIM-9L Sidewinder heat-seeking missile at very low altitudes and at the extreme edge of the Mirage's range was not a winning proposition. Consequently, after 1 May the AAF flew no more counter-air missions and instead tried simply to avoid the Harriers and concentrate on attacking British ships.<sup>13</sup>

### *The British Come Ashore*

On 21 May, the British finally launched their invasion of the islands, landing the reinforced 3rd Commando Brigade on the west side of East Falkland Island. The Argentines responded with a determined air offensive against the British naval forces supporting the landing. Over the next nine days, the Argentines flew 120 strike sorties against the British fleet. Bad weather, interservice disputes, and maintenance problems prevented a sustained effort from day to day, but on several days the Argentines were able to conduct heavy raids on the British fleet. To avoid the surface-to-air missiles (SAMs) and anti-aircraft artillery (AAA) on the British warships, the Argentine pilots attacked at extremely low altitudes, usually below 250 feet above the water. Although the Argentines lost 21 aircraft to British air defenses in that time--including 12 to Harriers--but they sank 3 British warships with iron bombs and the huge British transport *Atlantic Conveyor* with an Exocet.<sup>14</sup> The Argentines might have done far more harm: they damaged another six ships with iron bombs that failed to detonate because they had not been properly fused for the altitudes at which they were dropped. Given the ease with which small numbers of Argentine iron bombs sank other British ships, most or all of these other six ships likely would have sank had the bombs that struck them exploded.<sup>15</sup>

Between 21 May and 27 May British ground forces consolidated their beachhead at San Carlos on the west coast of East Falkland Island while the Argentines did nothing. Despite constant prodding from Buenos Aires to counterattack or at least harass the British ground forces while their beachhead was still vulnerable, the Argentine commander on the island, Major General Mario Menendez did nothing. Indeed, although Argentine military intelligence had predicted that the British would land San Carlos and then push overland toward Port Stanley on the east coast, Menendez believed the British landings were a diversion and the main attack would be a direct amphibious assault

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<sup>12</sup> Cordesman and Wagner, pp. 247-249; Gravino and Segal, p. 25; Hastings and Jenkins, pp. 146-157; Middlebrook, pp. 84-103.

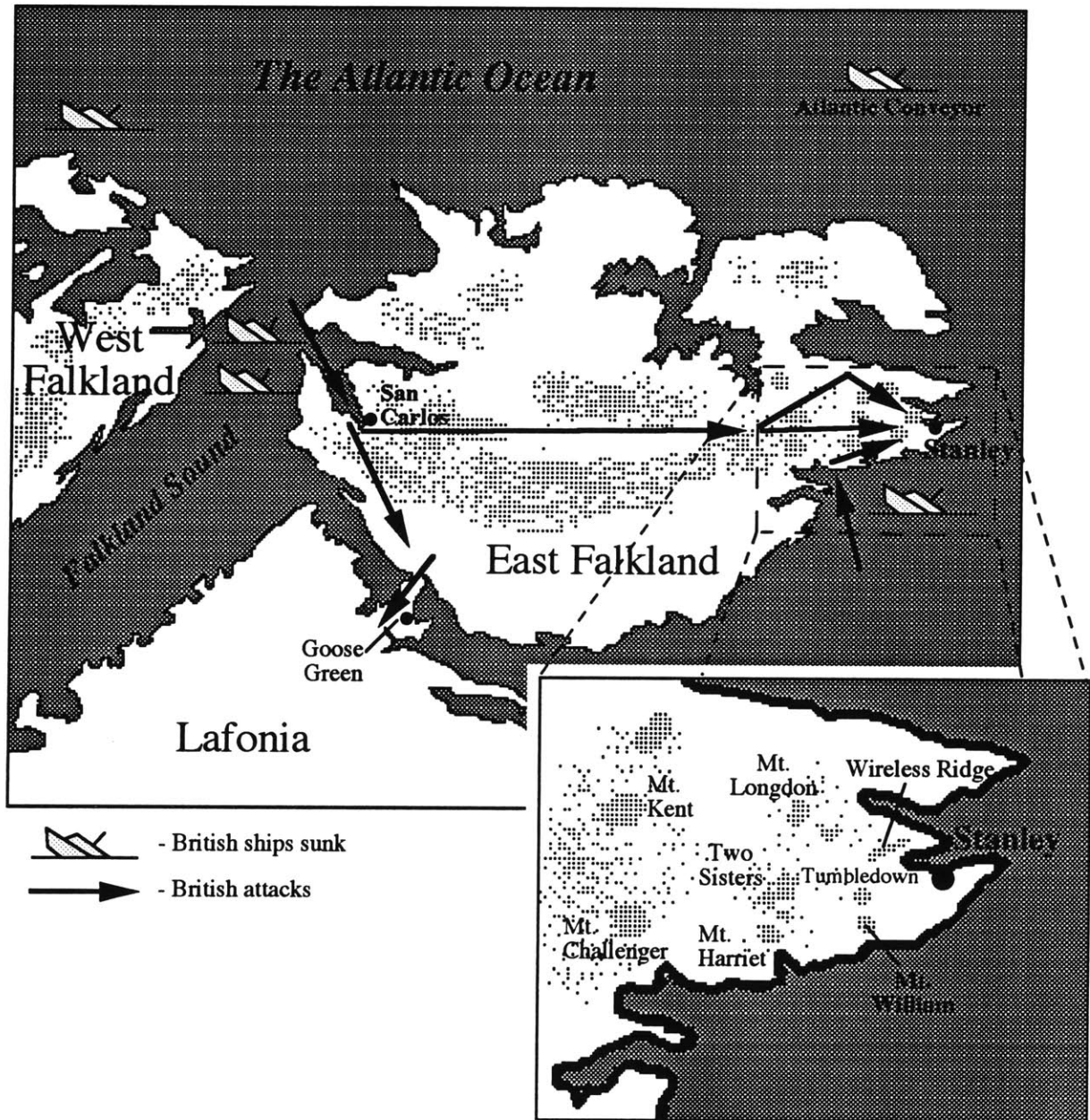
<sup>13</sup> Cordesman and Wagner, pp. 306-310; Hastings and Jenkins, p. 207; Middlebrook, pp. 90-91.

<sup>14</sup> These figures are from Middlebrook, pp. 74-75. Please note that there are significant discrepancies in reports of Argentine losses. Whenever I could not resolve such differences analytically, I relied on Middlebrook's figures. Indeed, Middlebrook's work *The Fight for the "Malvinas,"* based on extensive interviews with virtually every major participant on both the British and Argentine sides, is without doubt the most authoritative account of the war to date.

<sup>15</sup> Eddy, et. al., pp. 200-208; Freedman and Gamba-Stonehouse, pp. 358-369; Gravino and Segal, p. 27; Hastings and Jenkins, pp. 204-228; Laffin, pp. 90-95; Middlebrook, pp. 151-175.



## The Falkland Islands War, May-June 1982





against Stanley. Consequently, he made little effort even to reinforce the small number of units guarding the line of hills west of Port Stanley.<sup>16</sup>

### *Goose Green*

On 28 May the British began their "breakout" from the beachhead, with an attack by the elite 2nd Parachute Battalion against the Argentine forces at Goose Green. Goose Green was defended by about a battalion's worth of troops, but this force consisted of bits and pieces drawn from three different battalions of at least two different brigades. The Argentine forces there had little in the way of heavy weapons, winter clothing, or adequate supplies. Indeed, one company had only two radios, 11 of 25 light machineguns, two of ten 81 mm mortars, one of two 120 mm mortars, one of three recoilless rifles, and none of its vehicles. Although as many as 1,500 Argentine personnel were at Goose Green, only about 600 were combat soldiers while the rest were Air Force personnel, combat service support, and administrative personnel. In addition, the units at Goose Green were commanded by an Army general in Port Stanley who could not get out to Goose Green to command his troops because the Argentine Air Force and Navy refused to move his headquarters there without approval from their service chiefs, which could not be obtained before the battle. The Argentines had built a formidable defensive system across the isthmus with multiple trench lines dug in-depth, reinforcing bunkers and weapons pits, and very sophisticated interlocking fields of fire. However, the Argentines were not only defending against a British attack overland from the north, but also against an amphibious assault from the sea to both east and west. Thus one battalion was essentially trying to cover 31 kms of front. Because the Argentines were trying to cover so much ground with so little force, the British attack at the north end of the isthmus enjoyed the canonical 3:1 advantage in manpower.<sup>17</sup>

The British attacked the Argentine positions during the night of 28/29 May and eventually prevailed in a fierce fight. The "Paras" worked their way through the Argentine security screen despite accurate Argentine artillery fire, but were stopped cold at the main defensive line. They attempted to attack both Argentine flanks simultaneously but the Argentines quickly pulled platoons from the coastal defenses to reinforce the threatened sectors and conduct local counterattacks that held the British. When the Paras regrouped and resumed their attack during the morning of 29 May, they were able to force their way through the Argentine defenses by employing tremendous volumes of firepower, including using Milan anti-tank guided missiles (ATGMs) and Light Anti-tank Weapons (LAWs) to simply obliterate Argentine positions. In addition, one British platoon found that with the Argentine troops off the coastal defenses, they were able to wriggle along a low sea wall and turn the Argentine left flank. By noon the Argentines had committed their last reserves and the Paras had cleared many of their lines but the defenders fought on. Finally, British Harriers hit the Argentine AAA battery at Goose Green airstrip with napalm and cluster bombs. The Argentines had been using these guns to support their final defenses, and only when they were silenced did the Argentine units crack. The British then quickly surrounded the town of Goose Green and compelled the Argentine commander there to order a general surrender.<sup>18</sup>

After Goose Green the British began their overland march across East Falkland to Port Stanley, while the Argentines remained passive. Although Argentine aerial

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<sup>16</sup> Freedman and Gamba-Stonehouse, pp. 358, 363-364; Hastings and Jenkins, p. 323.

<sup>17</sup> Bishop and Witherow, p. 92; Freedman and Gamba-Stonehouse, pp. 371-372; Hastings and Jenkins, pp. 241; Middlebrook, pp. 178-179, 184, 197.

<sup>18</sup> Max Arthur, *Above All Courage, The Falklands Front Line: First-Hand Accounts*, (London: Sidgwick and Jackson, 1985), p. 144; Bishop and Witherow, pp. 92-94; Cordesman and Wagner, pp. 255-256, 316; Eddy, et. al. pp. 220-229; Hastings and Jenkins, pp. 238-262; Middlebrook, pp. 182-197; Moro, pp. 257-267; Julian Thompson, *No Picnic: 3 Commando Brigade in the South Atlantic, 1982*, Revised Edition, (London: Leo Cooper, 1992).

reconnaissance and ground patrols provided a good sense of the movement of British troops across the island and their build-up for a major assault on Port Stanley from the west, General Menendez remained unconvinced. He redeployed a small number of his units to face the British advance from the west, but still kept at least half his forces dug-in along the coast around Port Stanley to repulse the British amphibious landing he was certain would come. The Argentine Air Force continued to conduct strikes against the British fleet when it could but at a much reduced level as a result of combat losses and maintenance problems.<sup>19</sup>

### *The Battle for Port Stanley*

The balance of forces around Port Stanley was about even, after the British advantages in firepower and mobility, plus Argentina's inattention to the defense of the western approaches to the capital gave the British very significant advantages. General Menendez had about 8,400 personnel in and around the city, but only 6 combat battalions, of which three were deployed on the beaches. Thus only three Argentine battalions manned the line of hills guarding Port Stanley from the west. Against this, the British mustered nearly their entire expeditionary force--over seven infantry battalions. Argentine defenses were very haphazard: some positions had been occupied for many weeks and had been well fortified, while others had been occupied only days before the British assault and so were protected only by hasty defenses. When the British attacked the three outermost Argentine positions on Mt. Longdon, Two Sisters, and Mt. Harriet they sent 1,800 crack troops in three battalions against 850 tired, hungry, frostbitten Argentines in five companies. Moreover, the British attack was preceded by three days of constant bombardment from British mortars, artillery, naval guns, and Harrier strikes. Consequently, what is noteworthy is that, although some Argentine positions fell without much of a fight, others were defended fiercely.<sup>20</sup>

The British assault on Port Stanley began on the night of 11/12 June. The entire offensive was a very set-piece affair with British units conducting small, well-prepared and heavily supported attacks against Argentine defensive positions and reducing the ring of defenses around Port Stanley bit by bit. The first assault was conducted by 3rd Parachute Battalion against a company of Argentines on Mt. Longdon. Despite the unfavorable force ratio the Argentine defenders were clever and active and had fortified their positions well. They forced the British to advance through a narrow killing zone, ambushing and counterattacking the Paras repeatedly, and inflicting heavy casualties on them. Eventually, the British took the position only by employing tremendous firepower from Milans, LAWs, artillery, and mortars.<sup>21</sup>

The British had a much easier time on Two Sisters for several reasons. First, the Argentines had only occupied the position in the last week or two before the British attack and the units sent there did not have any entrenching tools. Second, the Argentines deployed two companies on the hill from two different battalions, and left those companies under the command of their respective battalions. Thus, when the British 45th Commando Battalion assaulted the southern end of the hill and caught the Argentine company there in a double envelopment, the Argentine company on the north end made no effort to come to their aid. Also, the company on the southern end of the hill was from the 10th Mechanized Brigade and so had no heavy weapons or transport, with the result that they were easily overwhelmed by British firepower.<sup>22</sup>

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<sup>19</sup> Cordesman and Wagner, pp. 256-258.

<sup>20</sup> Cordesman and Wagner, p. 258; Eddy, et. al. pp. 243-244, 250-251; Freedman and Gamba-Stonehouse, pp. 385, 395-397; Hastings and Jenkins, p. 285; Middlebrook, pp. 216, 220, 228, 244; Moro, p. 308.

<sup>21</sup> Arthur, pp. 223-226; Cordesman and Wagner, p. 258; Freedman and Gamba-Stonehouse, p. 396; Middlebrook, pp. 232, 235-236; Moro, pp. 306-307; Thompson, pp. 126-127.

<sup>22</sup> Bishop and Witherow, p. 125; Freedman and Gamba-Stonehouse, p. 396; Middlebrook, pp. 224, 237;

In the last attack of the night, the British 42nd Commando Battalion found a way through an undefended Argentine minefield, allowing them to attack the two Argentine companies on Mt. Harriet from the rear. The British soldiers were in among the Argentine reserves, headquarters and mortar positions before the fight ever began and they took the position and quickly scattered the defenders. Several Argentine officers tried to pull troops from the frontlines to counterattack the British in their rear, but many Argentine soldiers panicked and fled, while others simply refused to obey any commands to fight or move. One officer managed to pull together a platoon for a counterattack but it was pinned and dispersed almost immediately by British artillery and mortar fire.<sup>23</sup>

The fighting during the first night proved to have been much harder than the British had expected, leading them to postpone the next round of attacks for twenty-four hours. All day on 12 June, British artillery and naval guns continued to pound away at the Argentine second line of defenses, accompanied by constant airstrikes from the Harriers. Then, during the night of 13/14 June, the British resumed the offensive, attacking the Argentine units on Wireless Ridge and Tumbledown mountain.<sup>24</sup>

The 2nd Parachute Battalion was responsible for taking Wireless Ridge (actually a pair of parallel ridges running from east to west) and it had learned from the fighting at Goose Green. The Paras arranged for phenomenal amounts of fire support including artillery, naval gunfire, mortars, and light tanks to accompany their attack. British artillery fired 6,000 105 mm rounds during the 12 hour fight for these ridges. Defending this position, the Argentines had an exhausted company that had fallen back to Wireless ridge after the British assaults on 11 June, so it had not been there long and had not had time to adequately fortify its lines. The Paras conducted a simple frontal assault behind a wall of fire which blew the Argentines off the northern ridgeline. The Argentines attempted to fall back and regroup on the southern ridgeline, but the British hammered them with their guns and missiles and then sent a company around the Argentine left flank, allowing them to roll up the Argentine positions along the ridge. The Argentine brigade commander responsible for the defense of the western approaches to Port Stanley, Brigadier General Joffe, desperately scrambled for reinforcements to prevent the British from exploiting beyond Wireless ridge but had little luck because Menendez still refused to release significant bodies of troops from the defense of the beaches. Joffe scraped together two small company-sized forces--one of which was composed of the dismounted crews of Argentina's 12 Panhard armored cars--that conducted two uncoordinated counterattacks. These were clumsy efforts which the British quickly repulsed with their tremendous firepower.<sup>25</sup> One British parachute officer described these counterattacks as, "quite sporting efforts, but without a sporting chance."<sup>26</sup>

The final battle of the war was also the hardest fought. A reinforced company of Argentina's elite 5th Marine Battalion held Tumbledown mountain. They were attacked by the Scots Guards Battalion, a competent formation, but not the equal of the British Paras or Commandos. The Guards hit the southern flank of the Argentine lines but were driven back by accurate Argentine mortar and artillery fire. The British regrouped and this time got onto the left rear of the Argentine positions. However, the Marine platoon at this end of the line quickly redeployed to new positions to cover this unexpected attack and halted the Scots. The Argentines then tried to counterattack to regain their lost positions, but the British enveloped the Argentine assault on both sides and crushed it. Under heavy artillery support, the Guards again assaulted the Argentine lines, this time

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Thompson, p. 133.

<sup>23</sup> Freedman and Gamba-Stonehouse, p. 396; Middlebrook, pp. 241-243.

<sup>24</sup> Moro, p. 309.

<sup>25</sup> Eddy, p. 399; Hastings and Jenkins, pp. 304-307; Middlebrook, pp. 263-267; Moro, p. 310; Thompson, pp. 151-152.

<sup>26</sup> Middlebrook, p. 267.

cracking their defenses and forcing the Marines to withdraw.<sup>27</sup>

At that point the battle was essentially over. The defeat of the Marines on Tumbledown caused nearby Argentine units to desert their positions and flee back to Port Stanley. Having lost all of the protective hills to the west, and seeing his army retreating back to Port Stanley in disarray, Menendez surrendered his command to the British without a further fight. In the end, the Argentine armed forces suffered 655 dead and 1,200 wounded. They lost 25 helicopters and 75 aircraft--45 of which were lost in combat and 24 of these to British Harriers. The British had 256 killed and 777 wounded. They lost ten Harriers (none in air-to-air combat), 24 helicopters, and had six ships sunk and another eighteen damaged.<sup>28</sup>

### **Patterns of Argentine Military Effectiveness**

Argentine forces lost the Falklands Islands War. Overall, they performed poorly, but even at this level of generalization, they appear to have still performed better than most of the Arab armed forces in most of their wars. Of far greater importance, however, the areas of military operations in which the Argentine forces experienced their greatest problems, as well as those areas in which they consistently performed well, were completely different from the strengths and weaknesses of the Arab armies and air forces between 1945 and 1991.

### *Other Factors Influencing the Course of Battle*

Before delving into Argentine military performance it is useful to consider the various advantages and disadvantages of both sides. Going into the conflict, the Argentines had four principal advantages. First, the Falklands were only 400 miles from Argentina, but were 8,000 miles from Great Britain, placing a far greater logistical burden on the British than on the Argentines. Second, the Argentines had a slight numeric advantage on the ground, and a more significant one in the air. Third, the Argentines were defending and so accrued all of the inherent advantages of defense. Finally, the Argentines could count on the superb defensive terrain of the islands as well as the fortifications they had erected (in some places) during the weeks between their own invasion and the British counter-landings.

On the other hand, the British had any number of other advantages. While it is true that Argentina enjoyed something of a quantitative advantage overall, in certain key categories--such as helicopters and warships, the British were far ahead. In addition, as noted earlier, in numbers of combat troops the two sides were far more evenly matched. The presence of two British carriers around the islands allowed the British to generate far more air sorties of all kinds than the Argentines operating from bases 400 miles away. British weapons were generally much more modern and more capable than those of their Argentine counterparts. The most important example of this was the Harrier and its AIM-9L, which completely outclassed the Argentine Mirages and Daggers with their Shafrirs and Matra Magics. Great Britain also had an overwhelming advantage in firepower. The British infantry units themselves were more heavily equipped with ATGMs, LAWs, mortars, machine guns, grenade launchers, etc., than were the Argentine formations--some of which had barely any crew-served or anti-tank weapons at all. Beyond this, the British could count on far heavier support from artillery, naval gunfire and airstrikes than could the Argentines.

Another crucial British advantage was their superiority in intelligence assets.

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<sup>27</sup> Arthur, p. 296; Cordesman and Wagner, p. 259; Eddy, et. al., p. 251; Freedman and Gamba-Stonehouse, p. 398; Hastings and Jenkins, pp. 301-302; Middlebrook, pp. 251-262, 284-286.

<sup>28</sup> Cordesman and Wagner, p. 267; Hastings and Jenkins, p. 312; Middlebrook, pp. 282-286; Harlan K. Ullman, "Profound or Perfunctory: Observations on the South Atlantic Conflict," in Robert Harkavy and Stephanie Neuman, *The Lessons of Recent Wars in the Third World, Volume I*, (Lexington, MA: Lexington Books, 1986), p. 244.

Great Britain was fed a constant stream of intelligence from the United States. The British too refocused their formidable technical intelligence gathering capabilities on Argentina. As a result, throughout the campaign the British were able to intercept and decipher most of Argentina's secure military traffic and transmit it to units in the field in real time. Once it became clear that the Argentine Navy had no intention of venturing out of its homewaters after the sinking of the *Belgrano*, British SSNs were directed to lay off the coast of Argentina near the main airbases and alert the British forces in and around the islands when Argentine airstrikes were launched against them.<sup>29</sup> Lawrence Freedman and Virginia Gamba-Stonehouse wrote that "By the time Stanley was taken, the Argentine capabilities and positions were known to within 5 percent accuracy."<sup>30</sup>

#### *Argentine Ground Force Effectiveness: Enlisted Personnel*

At the bottom of the military hierarchy, Argentine soldiers performed extremely poorly throughout the course of the Falklands War. In their defense, Argentina's enlisted personnel were ill-prepared for war. Fully 75 percent of the Argentine troops in the Falklands were conscripts with less than six months of military service, while many of the remaining 25 percent were reservists called up for duty after the dispatch of the British fleet and sent to the Falklands without any refresher training. Only a few units, notably the 5th Marine Battalion, had troops that had served for more than six months, and even in the case of the Marines, few had served for more than a year. To make matters worse, Argentine Army training was notoriously soft, instilling little discipline or actual military skills in the short time each conscript was in the Army.<sup>31</sup> As a result, Argentine conscripts "didn't know one end of a gun from the other."<sup>32</sup>

Still, not all of the problems among Argentine enlisted ranks can be blamed on the military system. The troops brought other problems with them. Many of the Argentine enlisted men were illiterate Indians. Most were from the sub-tropical regions of the country and so were unused to the Arctic weather of the Falklands. Personal hygiene among the troops was very poor, and in the climate of the Falklands, this led to rampant medical problems. Although most Argentines were ecstatic about the seizure of the Falklands, few wanted to fight Great Britain for them. Consequently, many of the troops lacked any commitment to their mission, and the winter weather and supply problems quickly turned this apathy into misery.<sup>33</sup> British special forces units reconnoitering the Argentine positions, "formed an impression of an indolent, apathetic army careless of military routines, indifferent to their officers, suffering acutely from the weather."<sup>34</sup>

On top of all this, Argentine ground units suffered from severe officer-enlisted frictions. The officer corps was a professional body with tremendous pride in its professionalism. Most officers saw their troops as useless, ignorant, "short-timers" possessed of few militarily useful skills. Similarly, the enlisted personnel mostly considered their officers (and NCOs) martinets unconcerned with their well-being and pursuing a profession alien to their own philosophies. Argentine military culture had developed a severely stratified command structure by which the officers were encouraged to remain aloof from their troops as much to preserve their cherished corporate identity as to maintain a proper air of authority. Most Argentine officers knew and cared little about their troops and most of the troops knew and cared little about their officers. Indeed, after

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<sup>29</sup> Cordesman and Wagner, p. 282; Freedman and Gamba-Stonehouse, pp. 131-132, 189; Hastings and Jenkins, pp. 157, 207; Middlebrook, p. 80; Moro, pp. 89-91.

<sup>30</sup> Freedman and Gamba-Stonehouse, p. 382.

<sup>31</sup> Bishop and Witherow, p. 142; Cordesman and Wagner, pp. 240-241, 264; Gravino and Segal, p. 19; Hastings and Jenkins, pp. 177, 323; Middlebrook, pp. 49-51; Murguizur, p. 136.

<sup>32</sup> Bishop and Witherow, p. 142.

<sup>33</sup> Eddy, et. al., p. 382; Hastings and Jenkins, p. 177.

<sup>34</sup> Hastings and Jenkins, p. 177.

deploying to the islands, most Argentine officers made little effort to train their men, house them properly, or even see that they were warm, dry, and fed on a regular basis.<sup>35</sup>

Given this background it should not be surprising that Argentine troops performed poorly in battle, indeed, it is surprising they did not perform worse than they did. Argentine enlisted personnel generally displayed little personal bravery or commitment in combat and unit cohesion was mediocre. Some units threw away their weapons at the first sign of battle and waited to surrender. On many other occasions, they put up a determined fight at first, but when the British began to push through their lines, they broke and ran. Argentine officers frequently had difficulty putting together counterattacks or shifting forces from quiet sectors to stem British assaults because their troops simply refused to obey their orders to get out of the trenches and go into battle. Nevertheless, there were instances, such as at Goose Green, Mt. Longdon and Tumbledown where Argentine troops stuck together, fought hard, maneuvered and counterattacked until they were physically overpowered by the British.<sup>36</sup>

Argentine enlisted personnel had a very mixed record with weapons handling. Most Argentine soldiers were not very good with their small arms, and neglected regular maintenance and cleaning. However, the British consistently reported receiving very accurate fire from enemy machine guns, mortars, and artillery. This seems highly incongruous given the inadequate training given to Argentine enlisted personnel. One possible explanation is that a high percentage of the small number of career soldiers (or an unusual number of NCOs and officers) were assigned to heavy weapons crews to ensure that they were employed properly.

#### *Argentine Ground Forces Effectiveness: Tactical Leadership*

In contrast to Argentina's enlisted personnel, its junior officers were actually quite good. As noted above, their officer corps cherished a corporate identity that gave them great pride in their skills as military officers, and while they generally held their troops in disdain, they were committed to their profession and turned out to be reasonably good tactical commanders. In addition, contrary to the inaccurate claims in many of the early histories of the war, Argentine junior officers (and NCOs) generally remained at their posts and did not desert. Indeed, in most cases, it was the Argentine officers who tried to fight on while their troops fled.<sup>37</sup> In his own account of the conflict, Brigadier Julian Thompson, commander of 3rd Commando Brigade, notes that, "On Mt. Harriet, as elsewhere, the Argentine officers and senior NCOs fought hard and on several occasions towards the end of the battle tried to prevent their men surrendering by firing at them."<sup>38</sup>

Argentine tactical leadership was creative, aggressive, able to act independently in pursuit of the larger goals of an operation, and able to react quickly and efficiently to unforeseen events. Argentine units frequently tried to maneuver on the battlefield to ambush or outflank British units, even though the British were on the offensive. Similarly, many Argentine units reacted rapidly to British maneuvers, repositioning

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<sup>35</sup> Arthur, p. 144; Cordesman and Wagner, pp. 265-266; Gravino and Segal, p. 32; Hastings and Jenkins, p. 295; Nora Kinzer Stewart, "A Case Study in Cohesion: South Atlantic Conflict, 1982," *Military Review*, April, 1989, p. 37.

<sup>36</sup> Arthur, p. 202; Bishop and Witherow, p.27; Eddy, et. al., pp. 254, 374; Gravino and Segal, p. 29; Hastings and Jenkins, pp. 262; . Some analysts argue that Argentine soldiers fought incredibly hard, and that it was their officers who deserted at the first sign of trouble. (See for example Hastings and Jenkins, pp. 262, 283.) However, I favor the analysis of those authors such as Middlebrook and Gamba-Stonehouse with extensive access to the Argentine side as well as the British military officers who fought the war, such as Brigadier Julian Thompson and the numerous accounts in the Arthur volume. All of these authors contend that the soldiers were unmotivated and more prone to flee than to fight, while it was the professional officer corps that stood and tried to fight it out with the British.

<sup>37</sup> Bishop and Witherow, p. 27; Stewart, p. 36; Thompson, p. 143.

<sup>38</sup> Thompson, p. 143.

themselves to best meet the assault.<sup>39</sup> Argentine platoon, company, and battalion commanders shifted reserves to bolster threatened sectors and counterattacked entirely on their own discretion.<sup>40</sup> Indeed, in a few cases, Argentine junior officers disobeyed the orders of their superiors to retreat and instead counterattacked to try to retake a fallen position.<sup>41</sup> In most cases, however, their initiative was not rewarded because the troops under their command were unwilling to execute these operations. Argentina's junior commanders also were very diligent about maintaining a constant cycle of reconnaissance patrols. However, Argentine troops hated patrolling; they made only half-hearted efforts and generally aborted their missions at first contact with British forces.<sup>42</sup>

Argentine ground forces more generally were quite creative in their efforts to defend the islands. For example, in one incident, an Argentine Army officer at Port Stanley airfield removed a rocket launcher from a damaged Pucara strike aircraft, wired it to an aircraft-towing tractor and used this jury-rigged rocket-launcher to attack the British when they approached the airfield. The British were impressed.<sup>43</sup> When it became clear that the Argentine Navy would not leave port for fear of British SSNs, they removed one of the Exocet launchers from an Argentine frigate and flew it to the Falklands where it was mounted on a flatbed truck. Although this unusual platform limited the weapon's field of fire, on 11 June, the Argentines used it to put an Exocet into the side of the destroyer HMS *Glamorgan*, badly damaging the ship and putting it out of action for the rest of the war.<sup>44</sup> When British Harriers and Vulcan bombers began bombing Stanley airfield to try to put it out of commission, the Argentines quickly repaired the damage and then painted mock bomb craters on the runway that fooled British aerial reconnaissance into believing the runway too damaged for flight operations.<sup>45</sup>

Still, Argentine junior officers were far from perfect. Virtually all of Argentina's tactical commanders appeared to know parts of the right way to conduct modern military operations, but none understood or seemed to remember the entire range of command responsibilities and operational methods. All of the Argentine commanders performed some operations well but others poorly--or simply failed to perform them altogether. For instance, at Goose Green, the Argentines had a good security screen but their counterattacks were weak and ill-timed. By contrast, at Mt. Longdon and Tumbledown, the Argentines failed to deploy an adequate security screen but counterattacked forcefully and immediately. Clearly, these officers were reasonably competent, and mostly had the right idea as to how best to conduct their operations. But they appeared to regularly forget certain elements or to execute others improperly. This pattern of behavior suggests that the greatest problem among Argentine junior officers was inadequate training. They had been taught the proper techniques and seemed to have some instinctive understanding of military operations, but had not had the opportunity to practice frequently enough to get down the mechanics of military tasks to the level necessary to execute them in the chaos of battle. This explanation is supported by numerous references to the limited amount of time Argentine units spent training and exercising.<sup>46</sup>

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<sup>39</sup> Hastings and Jenkins, p. 243; Middlebrook, pp. 184, 187-188, 192, 241; Moro, p. 307.

<sup>40</sup> Arthur, pp. 154, 211; Freedman and Gamba-Stonehouse, pp. 375, 396-398; Hastings and Jenkins, pp. 306-307; Middlebrook, pp. 184, 188-190, 241, 260, 264, 267; Moro, pp. 263, 306; Thompson, p. 152.

<sup>41</sup> See for example, Freedman and Gamba-Stonehouse, p. 398.

<sup>42</sup> Arthur, 237; Eddy, et. al., pp. 372, 377-378, 380; Hastings and Jenkins, pp. 177, 290; Middlebrook, p. 181; Thompson, pp. 111-113.

<sup>43</sup> Murguizur, p. 140.

<sup>44</sup> Hastings and Jenkins, pp. 296-297; Middlebrook, pp. 246-247.

<sup>45</sup> Freedman and Gamba-Stonehouse, p. 327.

<sup>46</sup> Bishop and Witherow, p. 125; Cordesman and Wagner, pp. 265-266; Middlebrook, p. 237; Thompson, p. 126.

### *Argentine Ground Forces Effectiveness: Strategic Leadership*

The performance of Argentina's senior military commanders was awful. The one exception to this rule was the planning of the initial invasion, which was quite competent even though it was not the most demanding military operation. Beyond this, it is difficult to find bright spots. In particular, General Menendez, the supreme commander of Argentine forces in the Falklands (at least nominally) was a political appointee with little understanding of conventional military operations and no desire to command Argentine troops in battle against the British.<sup>47</sup> His leadership was disastrous during the war and he and his senior subordinates must bear much of the blame for defeat.

The broad patterns of Argentina's senior Army leadership on the island were a constant hindrance to their defense of the island. Argentine tactical commanders enjoyed considerable freedom of action not because Menendez consciously decentralized authority, but because he and his staff simply failed to exercise command in most cases. As a result of this negligence, the Argentines had great difficulty conducting operations involving forces from more than one battalion, nor could they shift forces from different units (especially different battalions) quickly to aid units in danger. Without the coordinating abilities and command authority of Menendez' headquarters nothing could move, and he and his staff rarely recognized the need for such leadership. When they did react at all, the Argentine command moved painfully slowly, allowing minor setbacks to turn into major defeats. Part of this problem resulted from the fact that Menendez never kept a reserve and never expected British attacks at night, even on the eve of the final battle of the war. Throughout the campaign, Menendez and his staff were passive and plodding, demonstrating not the least bit of creative flare or aggressiveness. Whenever he was pressed either by his tactical commanders or by the leadership in Buenos Aires to move against the British, Menendez found plenty of excuses for doing nothing.<sup>48</sup> Sir Michael Carver, remarked with typical understatement that General Menendez was "Particularly unenterprising."<sup>49</sup>

Menendez also made appalling decisions regarding specific aspects of Argentine strategy, preparations, and operations. For example, he opted to defend only Port Stanley, and chose not to even try to contest the British landings, when the British forces would be at their most vulnerable. Menendez then undermined his own strategy by sticking two of his nine infantry battalions on West Falkland Island--where they were cut-off by British naval and air power and completely incapable of supporting the defense of Stanley--and putting another at Goose Green, where it too was out of position to help defend Port Stanley. Consequently, Menendez had only six battalions to defend Stanley against eight British infantry battalions possessing far better firepower, training, and motivation as well as air and naval superiority. In short, he simply wasted one-third of his force by deploying them where they could not contribute to his strategy of defending only Port Stanley.

Menendez and his staff created a bizarre and highly damaging command and control scheme. Rather than keep his battalions subordinate to their three organic brigade commands, he sent one brigade commander back to Argentina, placed all six battalions around Stanley under the command of another brigade commander, and then assigned the three battalions at Goose Green and on West Falkland to the third brigade commander. The six battalions around Stanley were more than one brigade headquarters could effectively control, while the other brigade headquarters had tremendous difficulty commanding battalions scattered over several hundred square miles on two different islands. Menendez and his staff exacerbated these problems by constantly dividing up

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<sup>47</sup> Freedman and Gamba-Stonehouse, pp. 147-148.

<sup>48</sup> Cordesman and Wagner, p. 282; Eddy, et. al., pp. 357-358, 395, 397; Freedman and Gamba-Stonehouse, pp. 363-364, 389; Hastings and Jenkins, pp. 230, 324-325; Middlebrook, pp. 236, 244; Ullman, p. 250.

<sup>49</sup> Michael Carver, *War Since 1945*, (London: Ashfield press, 1990), p. 288.



battalions and recombining sub-units into new formations. In most cases, those sub-units were left under the command of their original formation rather than creating an ad hoc command to control all elements of the new formation. In other instances, such as at Two Sisters, Menendez divided key terrain features between two or more units not under the same commander.<sup>50</sup>

Even in executing his preferred (and probably misguided) strategy of defending only Port Stanley, Menendez did poorly. First, he failed to defend Mt. Kent and Mt. Challenger, two major heights that dominated the hills around Stanley. The British were astonished that they were able to take these two positions with just small special forces patrols. They were extremely strong natural defensive positions, and without them the British could never have attacked Stanley. On the other hand, control of these mountains allowed the British artillery and mortars to hammer the Argentines on Mt. Longdon, Mt. Harriet, Two Sisters, and Tumbledown with impunity.<sup>51</sup> Second, he failed to pull troops off the beaches around the capital to reinforce the line of hills facing west even when it became patently clear that this was the direction of the main British thrust. Argentine intelligence had predicted time and again that the British would attack Stanley overland from the west. While Menendez was not the first field commander in history to ignore intelligence assessments that later turned out to be accurate, by early June he probably should have realized that these assessments were accurate. Argentine patrols and aerial reconnaissance gave a good picture of the extent of the British build-up around Stanley and made it clear that this would be the direction of the main British assault. This being the case, Menendez should have had more than half his force covering this broad axis. Even giving him the benefit of the doubt and assuming that it might have been reasonable for him to have believed that the British could still have had one or more battalions still at sea on 11 June for use in an amphibious assault on Stanley, after 11 June there was no possible reason not to reinforce the western defenses. On 11 June, the British smashed five Argentine companies in the outer ring of hills west of Stanley. Consequently, there was no reason to believe that the remaining four companies defending the inner ring of hills (with less extensive fortifications than on the outer ring) could hold back the British. Thus, on 12 June Menendez should have recognized that, regardless of whether the British were going to land on the beaches around Stanley, they were going to cave in his left flank and take the capital from the west if he did not pull troops off the beaches and reinforce this sector. But he never did and three more battalions--another third of his force--were left sitting on the beaches, irrelevant to the battle.

The Argentine high command on the mainland was little better. Reinforcements to defend the islands were plucked from all over the country with little thought given as to whether they were the right forces for the job. In some cases, units were sent for political reasons, such as trying to ensure the support of particular cities or regions for the war by sending units raised and garrisoned in those areas. None of the units sent had any training in Arctic operations and very few had any winter clothing or equipment. In general, the Argentine high command failed to think through what forces would be needed to defend the Falklands and then make the necessary arrangements to move them there. The entire 10th Mechanized Brigade deployed without its armor or other heavy weapons, combat engineers were sent without any of their specialized vehicles and equipment, and many anti-aircraft units were sent without their guns or SAMs. Conscript units were sent into battle with little or no training and reserves were not given any refresher training before being shipped off to the Falklands, while the small number of professional units in the army were held back against an unlikely Chilean attack.

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<sup>50</sup> Eddy, et. a., p. 146; Hastings and Jenkins, p. 322; Middlebrook, pp. 53, 55-56, 63.

<sup>51</sup> For a concurring view, see Cordesman and Wagner, p. 285.

### *Argentine Ground Force Performance: Other Categories*

Of all its ground combat arms, the performance of Argentina's artillery corps stood out. Argentine artillery fought quite well during the course of the war. First-hand accounts of the fighting from the British side make numerous references to the accuracy and lethality of Argentine artillery and its ability to greatly complicate British operations. Time and again, British soldiers and officers noted the accuracy of Argentine artillery and mortar fire in a wide range of situations and under a wide range of conditions.<sup>52</sup> Argentina's artillery batteries demonstrated a very good ability to conduct pre-planned and pre-registered fire missions in support of established Argentine defenses. More impressive still, Argentine artillery demonstrated an ability to shift its fire quickly and effectively around the battlefield. On numerous occasions, immediately after an Argentine defensive position fell, their artillery would quickly bombard the fallen position to try to prevent the British from consolidating their hold and to allow Argentine troops time to regroup and counterattack or fall back to new lines. When British units attacked from unexpected sectors, and even when they got into the rear of Argentine positions, Argentina's artillery and mortars usually were able to redirect their fire within minutes and take the force under bombardment. Although British artillery usually prevailed in counterbattery duels, this was not always the case, and in some instances the British could not silence Argentine guns.<sup>53</sup> The Argentines also had a small number of Rasit battlefield surveillance radars that they used well and could fire artillery missions accurately based on readings from these systems.<sup>54</sup> As noted above, this exceptional performance suggests either that Argentine artillery units had a high percentage of professional soldiers or else had a surfeit of NCOs and/or officers.

Although the evidence is limited because there were no armored or mechanized units in the Falklands, Argentine forces seem to have done adequately in combined arms operations. Argentina's combat arms did reasonably well working together both in set-piece actions as well as in unanticipated operations. In particular, Argentina's artillery supported its infantry formations very well. Artillery missions were closely tied to the actions of the infantry and were quite flexible in their ability to support the infantry as the course of battle ebbed and flowed. In addition, the Argentine air force did a good, but not great, job providing support to ground forces in combat. The air force was quite good about flying reconnaissance missions in support of the ground operations. Also, on a few occasions, (most notably at Goose Green), Argentine strike aircraft flew close air support (CAS) missions that were timely and responsive to the needs of ground commanders. The greatest problems for the Argentines was that British command of the air made it very difficult for Argentine strike aircraft to conduct any kind of sustained effort in support of the ground troops. In addition, the Pucaras--Argentina's primary ground attack aircraft--were somewhat inaccurate and lacked the proper ordnance and so did little damage when they did fly CAS missions.<sup>55</sup>

### *Argentine Air Force Performance*

The Argentine Air Force (AAF) fought remarkably well during the Falklands

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<sup>52</sup> See for example, Arthur, pp. 160, 191, 198-201, 251, 293-294; Bishop and Witherow, pp. 27, 92; Cordesman and Wagner, p. 259; Eddy, et. al., pp. 246, 250-251; Freedman and Gamba-Stonehouse, p. 373; Hastings and Jenkins, pp. 294-296; 299; Laffin, p. 104; Middlebrook, pp. 235, 255; Moro, p. 311; Thompson, p. 112.

<sup>53</sup> Arthur, pp. 150, 198-201, 277; Eddy, et. al., p. 374; Thompson, pp. 112, 128, 133.

<sup>54</sup> Middlebrook, p. 234.

<sup>55</sup> Bishop and Witherow, p. 129; Eddy, et. al., p. 250; Freedman and Gamba-Stonehouse, p. 397; Thompson, pp. 77-80. For a concurring opinion of Argentine combined arms operations, see Dov S. Zakheim, "The South Atlantic: Evaluating Lessons," in James Brown and William Snyder eds., *The Regionalization of War*, (New Brunswick: Transaction, 1990), p. 40. For a dissenting view, see Cordesman and Wagner, pp. 282-283.

War, astonishing the British and much of the rest of the world. The politicization that crippled the rest of the military appears to have been absent from the process of pilot recruitment as AAF (and Navy) pilots were considered the nation's military elite and were chosen based on very demanding mental and physical standards.<sup>56</sup> Argentine pilots were extremely well-trained, most having been tutored by the French or the Israelis. The Argentines considered themselves to be the equal of Israeli pilots--whom they considered to be the best in the world--and their flying during the war made a good case in support of this boast.<sup>57</sup> Moreover, AAF pilots were incredibly brave, showing a professionalization and determination that was absent from most of the military.<sup>58</sup> In the words of Max Hastings and Simon Jenkins, "The British were awed by the courage of the Argentine pilots, flying suicidally low to attack, then vanishing amid flashes of pursuing Seacat, Blowpipe, and Rapier racing across the sky behind them. Alone among the enemy's three services, the Air Force seemed highly motivated and utterly committed to the battle."<sup>59</sup>

The Argentines suffered from several disadvantages. First, their bases were roughly 400 miles from the zone of operations, whereas the British carriers could steam in to less than 100 miles to launch and recover their aircraft. At this range, less than half of Argentina's aircraft could even reach their targets, while those that could had only enough fuel for a quick bombing run before heading home. There was simply no loiter time to carefully choose targets, orchestrate complex attacks, or wait for conditions to become more favorable for an attack run.<sup>60</sup> Second, the AAF had only very old planes--many of which, such as the Mirages, were not optimized for ship attacks. These planes were outclassed by the British Harriers, and they lacked the physical and electronic capabilities to fend off British air defenses. The newest planes, and those best for ship attacks were the five Super Etendards of the Argentine Navy. However, they were too new to be counted on, and too few (and with too few Exocet missiles) to really be a formidable threat.<sup>61</sup> Third, with the exception of the five Exocets, Argentina lacked the proper ordnance to go after ships, and so was forced to rely on "dumb" iron bombs.<sup>62</sup> Finally, the AAF had never planned or trained to fight a war at sea. Many of their pilots had never even flown over water. Only the handful of Navy pilots had any training in ship-attack missions. Consequently, the AAF pilots had to learn everything on the fly and ended up improvising most of their missions.<sup>63</sup>

Despite these handicaps, the Argentines performed extremely well. Argentine pilots and air staff learned remarkably quickly. At bottom, however, the most important reason for the AAF's success was that they proved to be superb flyers. Argentine aircraft on ship attack missions flew the last 150 miles to the islands as low as 10 feet above the

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<sup>56</sup> Some rumors have surfaced that it was really the Argentine Navy pilots who did most of the damage to the British. These rumors are apocryphal. The Argentine Naval Air Force comprised only a small proportion of the aircraft attacking the British--probably no more than 15-20 percent of the aircraft committed against the British were from the Navy. Moreover, while the Navy fliers had more experience attacking ships, it is not the case that they did noticeably better than the Air Force flyers. The best source on this topic is Moro's book *The History of the South Atlantic Conflict*. Moro was an Air Force pilot who describes each attack mission in excruciating detail, including the name and service affiliation of every pilot and the results of each bombing run.

<sup>57</sup> Interestingly, even before the Israelis the Argentines were trained by the best in the world. One of the first AAF instructors after World War II was the legendary German Stuka pilot Hans-Ulrich Rudel.

<sup>58</sup> Cordesman and Wagner, p. 303; Eddy, et. al., pp. 198, 207; Gravino and Segal, p. 27; Hastings and Jenkins, pp. 115, 120; Laffin, pp. 92, 95; Ullman, p. 248; Zakheim, p. 39..

<sup>59</sup> Hastings and Jenkins, p. 205.

<sup>60</sup> Cordesman and Wagner, p. 238; Eddy, et. al., p. 193.

<sup>61</sup> Cordesman and Wagner, p. 249; Eddy, et. al., pp. 194-196; Hastings and Jenkins, p. 48; Zackheim, p. 39.

<sup>62</sup> Cordesman and Wagner, p. 249.

<sup>63</sup> Cordesman and Wagner, pp. 302-303, 312, 336; Eddy, et. al., p. 193; Middlebrook, pp. 87, 152.

sea. They would cross West Falkland island at tree-top height. Then, at the last possible minute, they would pop-up from behind the hills, pick a target among the ships in Falkland sound, and then dive at the target, releasing their bombs at 150 feet but continuing on down to the deck to try to escape over the waves. The AAF flyers hugged the water and the terrain of West Falkland so well that the British rarely had more than a few seconds between when they detected a plane and when it released its bombs.<sup>64</sup>

Despite their lack of training in ship attacks, Argentine pilots from both the Navy and the AAF proved to be very accurate with their ordnance. By Martin Middlebrook's count, the Argentines launched 150 ship-attack sorties, of which 100 actually made it to the Falklands to make an attack. Of these 100, 16 were able to put their bombs into British ships. Given the fact that many of those 100 planes were shot down, damaged, or otherwise hindered by British air defenses, 16 percent is actually a very impressive hit-rate for pilots with no training in ship-attacks, in planes not designed for these kinds of missions, with unguided ordnance and having never been in combat before. As an aside, those 16 aircraft put 25 bombs into 14 British ships. They sank only 6 British ships, however, because only 11 of the 25 bombs exploded.<sup>65</sup> This was the great bane of the AAF: bombs improperly fused for the extremely low altitudes at which the AAF was attacking.<sup>66</sup> Only the half-dozen or so Argentine Navy A-4 pilots understood this problem and so climbed to 250 feet and then tossed their bombs to ensure that they would fuse properly. But since toss-bombing is far less accurate than the AAF's dive bombing tactics, the net result was about the same.<sup>67</sup>

Argentina's air force personnel were clever and creative in their operations against the British. Argentine airstrikes regularly attempted to come at the British from unexpected angles to catch them by surprise. On those occasions when Argentine aircraft had the time and numbers available they frequently broke up into smaller formations and attacked British ships simultaneously from two or more angles to try to overload their air defenses. An Argentine Neptune aircraft searching for the British carriers soon after the sinking of the *General Belgrano* flew its search pattern in such a way that the pilot convinced the British that he was looking for survivors from the cruiser and so was not intercepted. The Neptune found the British fleet and only poor weather prevented the Argentines from launching an airstrike. In an effort to increase the number of planes available that could attack the British ships, the Argentines tried rolling bombs out of the back cargo door of a C-130. Remarkably, in their test flight they were able to hit a British tanker with one of their bombs, but it too failed to detonate. The AAF also had a squadron of Lear jets which it used to simulate formations of attacking A-4s and Mirages. More than once, these planes were able to decoy the Harriers flying combat air patrol (CAP) over the British fleet, freeing the skies for true AAF strike aircraft.<sup>68</sup>

In air-to-air engagements the Argentines fared poorly, but it is very difficult to make the case that this was because of poor dogfighting skills on the part of AAF pilots. The extreme range drastically diminished the time Argentine fighters could devote to aerial combat, while the low altitudes at which they conducted their attacks were the worst possible for their Mirages and Daggers but best for the British Harriers.<sup>69</sup> The

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<sup>64</sup> Cordesman and Wagner, p. 274; Eddy, et. al., pp. 196, 199, 202-203; Hastings and Jenkins, pp. 207-208; Middlebrook, p. 171.

<sup>65</sup> Middlebrook, p. 286. Note that Cordesman and Wagner estimate that only 20 percent of Argentine bombs detonated properly (p. 254). However, Middlebrook's figures are probably more accurate.

<sup>66</sup> Cordesman and Wagner, p. 319; Eddy, et. al., p. 202; Freedman and Gamba-Stonehouse, p. 360; Moro, p. 227; Ullman, p. 243.

<sup>67</sup> Middlebrook, p. 159.

<sup>68</sup> Cordesman and Wagner, p. 256; Hastings and Jenkins, p. 292; Middlebrook, pp. 121-122; Moro, pp. 143, 315-316.

<sup>69</sup> Eddy, et. al., pp. 194-196; Hastings and Jenkins, p. 207.

Harrier was considerably more maneuverable at any altitude, and at wave-top heights, there was no comparison. However, the single most important British advantage was the AIM-9L Sidewinder which could be fired from any angle, while the Argentines had only older French and Israeli missiles that had to be fired close-in at the rear of the target. British, Argentine and American sources all agree that the AIM-9L was the key to British victory in air-to-air combat.<sup>70</sup> On 1 May, the Argentines sent several Mirages and Daggers out to escort the strike aircraft only to have them trounced by the Harriers and advanced Sidewinders. Thereafter, the AAF high command decreed that there would be no more dogfighting, and instead, all aircraft would attempt to avoid the Harriers as best they could and concentrate solely on ship-attacks.<sup>71</sup> Consequently, it is difficult to hold their air-to-air record (24 Argentine aircraft shot down against no Harriers shot down) against the AAF.<sup>72</sup> Indeed, British pilots remarked that when attacked by Harriers the Argentine pilots proved very good at evasive maneuvering to try to shake their pursuer and proceed with the bombing run.<sup>73</sup>

As noted above, the AAF made some efforts to support Argentine ground forces. However, for a number of reasons, these efforts made little difference to the outcome of the fighting. The great distance from the mainland made it almost impossible for the AAF to use its A-4s and Mirages for ground support missions. Moreover, most of the time, British Harriers made it impossible for the Argentines to fly missions with their Pucara ground attack aircraft. The Pucara pilots were also excellent flyers--as attested to by British helicopter pilots attacked by some Pucararas, as well as the Harrier pilots--but, for various reasons, their strikes did little damage to the British. To a great extent, the problem was that they lacked the proper ordnance--such as cluster bombs--to actually harm British infantry formations.<sup>74</sup>

The direction and planning of Argentine Air Force operations were of a very high caliber. The AAF conducted constant aerial reconnaissance missions, beginning with long range flights by a specially configured Boeing 707 to monitor the fleet as it made its way across the South Atlantic to the Falklands. Argentine patrols preceded every mission, and their information was quickly and efficiently incorporated into strike planning throughout the process--even updating or redirecting missions as the attacking planes flew into the zone of operations.<sup>75</sup> To overcome British jamming, the Argentines employed spotter aircraft, usually Neptunes, to designate targets for attacking aircraft, illuminate them, and provide any additional guidance needed by the Skyhawks and Mirages. Argentine air strikes were well-designed to minimize the effectiveness of British air defenses while still providing the pilots with a reasonable chance of hitting their targets. Their plans were flexible and very responsive to unforeseen developments. They found creative ways to take the British at unawares by disguising strikes, bringing them in from unexpected angles, or by suddenly deviating from established patterns.<sup>76</sup>

The AAF leadership cannot go blameless, however. In particular, they made several crucial mistakes in terms of their strategy that undermined the Air Force's contribution to the war effort. For instance, the AAF could have made much better use of its Pucararas. The Pucararas flew very little because of the Harrier threat, but as a result, they

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<sup>70</sup> Arthur, pp. 89-90; Cordesman and Wagner, pp. 262-263, 309; Eddy, et. al., p. 193; Hastings and Jenkins, p. 207; Moro, p. 114.

<sup>71</sup> Middlebrook, pp. 82-83, 90-91; Murguizur, p. 139.

<sup>72</sup> Middlebrook, pp. 284-285.

<sup>73</sup> Arthur, pp. 89-90.

<sup>74</sup> Cordesman and Wagner, p. 318; Thompson, pp. 77-80.

<sup>75</sup> Bishop and Witherow, p. 71; Cordesman and Wagner, pp. 278-279, 320; Eddy, et. al., p. 205; Freedman and Gamba-Stonehouse, pp. 233, 259, 289, 358, 361, 379; Middlebrook, pp. 122, 201; Moro, pp. 252, 273.

<sup>76</sup> Eddy, et. al., pp. 205-208; Freedman and Gamba-Stonehouse, p. 361; Middlebrook, pp. 123, 202; moro, pp. 274-276; Murguizur, p. 138.

contributed little to the campaign. In the end, the British captured nearly 40 of them intact, and it probably would have been better to have risked losing them to Harriers in hope that they could have made a greater contribution. Without question, the most serious strategic mistake the AAF high command made was to deliberately go after the British warships and ignore the British transports. The *Hermes* and *Invincible* were clearly crucial to the British operation, and the Argentines were entirely justified in their prodigious efforts to try to get at the carriers. However, the destroyers and frigates escorting the amphibious ships were the most expendable element of the British task force: they were the one asset of which the British had more than enough and could easily replace their losses. On the other hand, the British transports were vital, vulnerable, and in very short supply. Throughout the first weeks of the landing, London was terrified that the Argentines would attack *Fearless*, *Intrepid*, *Canberra* or some of the other, smaller transports. The troops, equipment, and supplies for the ground forces were literally crammed onto a handful of these ships. Indeed, the importance of these transports was demonstrated when the Argentines inadvertently sank the *Atlantic Conveyor*, sending crucial helicopters, tents for 4,000 men, a water desalination plant, and mobile landing strips for the Harriers, plus combat consumables, to the bottom of the ocean. The loss of these supplies badly fouled up British plans. Had the Argentines been able to sink three or four more British transports, rather than warships, they could have greatly delayed the operation, and perhaps forced the British to abort it altogether.<sup>77</sup>

#### *Combat Support and Combat Service Support Functions*

Argentina's intelligence services turned in a mostly mixed performance. Strategic intelligence was pretty bad, while tactical military intelligence proved to be quite good. Argentina's national level intelligence services were heavily politicized and so usually told the junta exactly what they wanted to hear. Their gravest mistake was to predict that the British would not go to war in response to an invasion of the Falklands. This was what the junta wanted to hear, and from this error flowed many other Argentine problems.<sup>78</sup> At tactical levels, Argentine intelligence proved quite good at its job. Army intelligence correctly picked San Carlos as one of the most likely points for the British landings; they correctly forecast the British move against Goose Green and then the overland advance against Stanley rather than an amphibious assault; and they gave General Menendez a very good idea of the progress of the British advance across East Falkland and their build-up around Stanley in early June.<sup>79</sup> In one noteworthy event, on 13 June, Argentine intelligence fixed the location of the British 3rd Commando Brigade headquarters on Mt. Kent (probably through signals intelligence analysis) and were able to call in an immediate air strike by Air Force A-4s on this position. The Argentines might have killed most of the staff had it not been for a quirk of fate that kept the British commanders out of the main tent at the moment of the strike.<sup>80</sup> The Argentine air force and naval intelligence services did an outstanding job tracking British ship movements and relaying them in real time to approaching strike aircraft. In perhaps their finest feat of all, Argentine intelligence tracked radar contacts with British Harriers and then used this information to pinpoint the location of the two British carriers--information that was then used to set up an Exocet strike on the carriers. The carriers turned out to be right where they were supposed to be, but the missile was decoyed and then shot down by an escorting destroyer.<sup>81</sup>

<sup>77</sup> Bishop and Witherow, p. 82; Freedman and Gamba-Stonehouse, p. 361; Hastings and Jenkins, p. 227; Middlebrook, pp. 164, 173-174;

<sup>78</sup> Hastings and Jenkins, pp. 49, 322; Gravino and Segal, p. 23.

<sup>79</sup> Bishop and Witherow, p. 71; Eddy, et. al., pp. 122, 362, 380.

<sup>80</sup> Bishop and Witherow, p. 129; Eddy, et. al., p. 250; Freedman and Gamba-Stonehouse, p. 397.

<sup>81</sup> Freedman and Gamba-Stonehouse, p. 361.

On the other hand, Argentina's handling of information was very poor. Operational security was extremely lax, greatly aiding British intelligence collection efforts.<sup>82</sup> In addition, the military suffered from severe compartmentalization of information. Because the constant political infighting had taught Argentine officers not to trust one another, none were willing to share information even when the shooting started. This situation was especially pernicious among the senior offices who distrusted each other and their subordinates completely. As a result, it was the general rule that senior commanders (including the high command in Buenos Aires) kept junior officers in the dark about even the most basic information regarding their own or enemy forces.<sup>83</sup>

The record on Argentine logistics was similarly poor. In battle, Argentine troops were frequently hindered by shortages of ammunition, and away from it they lacked food, clean/warm clothing, sleeping gear, tents, medical supplies, weapons' cleaning materials, spare parts, and virtually everything else. Argentina's greatest logistical problem was the British air and sea blockade around the islands, which made any movement of forces and resupply difficult after 1 May when the British fleet arrived in the South Atlantic. The Argentine Air Force must get credit for flying at least one C-130 transport into Stanley right under the noses of the British every night. Try as they might, the British were never able to stop this shuttle, although the amount of cargo a single C-130 could carry was laughable given the requirements of a 13,000 man occupation force. But Argentine logistics problems cannot all be blamed on the British blockade. Buenos Aires had failed to make any real logistical plans or preparations for supporting a garrison on the island before the invasion, and so were overwhelmed when they were suddenly called on to support a multi-brigade combat force. Consequently, Argentine forces began experiencing shortages of food and medical supplies almost immediately after the invasion and nearly a month before British warships ever arrived in the area. Argentine officers were very lax about making sure their troops were properly provisioned, and even in those cases where their officers were diligent, the Argentines lacked the helicopters or all-terrain transports to be able to get supplies to the front-line troops in a timely, regular fashion. Whenever Buenos Aires decided to add more troops or equipment to the forces already in the Falklands they invariably failed to make the necessary provisions for the additional supplies these units would need. As a result, reinforcements simply increased the logistical burden on the force defending the islands.<sup>84</sup>

Argentine logistical problems were severely compounded by the crippling interservice rivalry within the Argentine armed forces. Some cross-service cooperation was possible at the highest levels of the junta only because the senior military leaders recognized that their fate would be determined by the outcome of the war. However, among the lower ranks of the officers corps, there was tremendous antipathy and a malicious unwillingness to cooperate. To some extent, such coordination was impossible at that late date because the services had only very rarely engaged in joint exercises. All three services took responsibility only for supplying their own forces on the islands, especially after the British SSNs arrived. Since the Army had no way of getting supplies to the island without the Air Force or Navy's aid, they suffered terribly. Eventually, some high-level discussions effectively forced the Air Force and Navy to carry some Army supplies to the islands, but the Army never received what it needed.<sup>85</sup> Although Menendez was nominally in command of all air, sea and ground forces in the Falklands, in actuality he had a great deal of difficulty getting the Air Force or Navy personnel there

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<sup>82</sup> Murguizur, p. 138.

<sup>83</sup> Middlebrook, pp. 65, 290; Murguizur, p. 135.

<sup>84</sup> Cordesman and Wagner, pp. 265, 334; Eddy, et. al., pp. 122, 125, 146; Hastings and Jenkins, pp. 286-287; Middlebrook, pp. 64, 142; Murguizur, p. 136; Stewart, p. 34.

<sup>85</sup> Freedman and Gamba-Stonehouse, p. 147; Middlebrook, p. 143.

to accept his orders. Both the Navy and the Air Force monitored British ship movements around the islands but refused to share their information with each other. One of the few exceptions to this pattern of service isolation was the limited support provided by Air Force reconnaissance and attack aircraft to the Army.<sup>86</sup>

Argentine technical skills varied greatly. The Argentines demonstrated a fairly impressive capability for employing high-tech equipment, modifying weapons, repairing sophisticated technology, and devising technical solutions to military problems.<sup>87</sup> For instance, when war broke out between Argentina and Great Britain, French technicians had not yet performed the various operations that essentially "married" the Exocet to the Super Etendard and allowed the planes to fire the missiles. In support of their NATO ally, France broke its military ties to Argentina before the Exocets and Super Etendards were properly linked up. Indeed, the French believed this operation so complex that they told the British not to worry about the Exocets because the Argentines would not be able to do it themselves. However, the Argentines did it, and did it very quickly.<sup>88</sup> The conversion of the ship-borne Exocet launcher into a coastal defense platform is another example of this talent. However, the other side of this coin is that routine maintenance among Argentine units was abysmal. Even the Argentine Air Force suffered severe maintenance and repair problems that quickly reduced its sortie rate.<sup>89</sup> The inability of Argentine armorers to make the simple adjustment to their bomb fuses to allow them to detonate when dropped from low altitudes also undercuts the image of Argentine technical prowess.<sup>90</sup>

### **Decisive Factors in the Falklands Islands War**

Probably the single most important element in the war's outcome was the miserable performance of Argentina's senior military leadership. Argentina's high command left its forces in no shape to hold the islands against the British. They failed to provide Menendez with the forces, supplies, infrastructure, and other support that he needed. In addition, the AAF's decision to go after British warships rather than transports was a critical mistake that essentially doomed the heroics of its pilots to irrelevance. By the same token, Menendez' conduct of the campaign on the ground was nothing short of disastrous. While his units were clearly not the equal of their British counterparts, Menendez consistently placed his troops in extremely disadvantageous situations. The fact is that, as demoralized, untrained, underequipped, and outnumbered as they were, at Goose Green, Mt. Longdon, and Tumbledown, Argentine troops gave the British a very rough time. It was well within the reach of Argentina's senior military leadership to have seen to it that the island was defended by happier, better trained, better armed, and greater numbers of troops. Had this been the case, and had they been commanded by a general capable of using such forces to maximum advantage (rather than maximum disadvantage) the Argentines might have been able to hold the islands. Likewise, had the Argentines directed their air effort against the British transports, there probably would have been a good chance they could have caused the British crippling problems and even forced them to give up the enterprise altogether.<sup>91</sup>

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<sup>86</sup> Cordesman and Wagner, pp. 265, 282, 328; Freedman and Gamba-Stonehouse, pp. 103, 144-145, 147, 359, 372; Hastings and Jenkins, pp. 218, 322; Murguizur, pp. 136, 138; Stewart, p. 34; Ullman, p. 250.

<sup>87</sup> Guilmartin, p. 62.

<sup>88</sup> Middlebrook, p. 121; Moro, p. 149. Please note that other sources claim that French technicians illegally in Argentina performed this operation. However, Middlebrook convincingly argues (in part because he appears to have interviewed the technicians in question) that it was the Argentines themselves who married up the Exocets and the Super Etendards.

<sup>89</sup> Bishop and Witherow, p. 18; Cordesman and Wagner, p. 312; Middlebrook, p. 168.

<sup>90</sup> Hastings and Jenkins, p. 228.

<sup>91</sup> For concurring opinions of the importance of poor generalship to Argentina's defeat, see Cordesman and



After generalship, the next greatest problem the Argentines faced was the poor morale of their troops and the supply problems that were a major contributor to low morale. The crucial difference in how hard the British had to fight in each ground battle was how hard the Argentine soldiers were willing to fight. In nearly every engagement, Argentine junior officers set-up good defensive positions, they reacted well to British moves, tried to shift forces to deal with problems, and were quick to counterattack where the British assaults were most successful. However, their troops were often indifferent or downright antagonistic to their efforts. The easiest battles for the British were those in which the Argentine soldiers did not try hard to defend their positions, would not follow their officers in counterattacks, and surrendered or fled as soon as the British seemed to be gaining the upper hand. What made the British actions against Argentine units like the 5th Marine Battalion difficult and costly were not necessarily the skills of the Argentine soldiers, but simply that they fought hard, stuck together, and obeyed the instructions of their officers.<sup>92</sup>

Of course, the Argentine defeat also was as much the result of British advantages and the skill of British commanders in employing these advantages to exploit Argentina's weaknesses. While overall, the numerical advantage favored the Argentines, Menendez' inept deployment and handling of his troops coupled with careful British generalship allowed the British to concentrate superior force at the decisive point on virtually every occasion.<sup>93</sup> Far more important than the quantitative edge, however, were Britain's advantages in weapons' quality and sheer firepower. In every battle fought in the air or on the ground, British forces bludgeoned sometimes quite skillful Argentine opponents into submission. This is not to suggest that the British were not themselves skillful or did not try to prevail by maneuvering, only that it was usually the weight of their fire, rather than their maneuvering, that proved decisive in battle.<sup>94</sup> As Cordesman and Wagner noted, "Without naval gunfire and artillery support, it is doubtful that British troops could have broken up Argentine defenses around Port Stanley."<sup>95</sup> Or in the words of one British officer, "It was the guns. They never stopped."<sup>96</sup>

Finally, one must also take into account the dramatic difference in the proficiency of the British and Argentine soldiers. The British commandos and paratroopers who made up the bulk of the expeditionary force were the elite formations of a superbly-trained army. In the Falklands, they demonstrated that they were far better at employing their weapons, executing tactical operations, and fighting at night than their Argentine counterparts. Many of these troops also were far more experienced in Arctic warfare than the Argentines because 3rd Commando Brigade was slated for deployment to Norway as part of a NATO defense of Europe. British soldiers also could operate at a much higher tempo than could Argentine soldiers, and as volunteers and professionals, were far more committed to their mission than Argentina's troops were to their own.<sup>97</sup>

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Wagner, pp. 264-265; Hastings and Jenkins, p. 324.

<sup>92</sup> For concurring opinions on the importance of poor morale to Argentina's defeat, see Arthur, pp. 145, 197, 288, 296; Bishop and Witherow, p. 27; Eddy, et. al., pp. 229; Hastings and Jenkins, pp. 286, 294-295, 313; Laffin, p. 125; Middlebrook, p. 241; Zackheim, p. 39.

<sup>93</sup> See for example, Eddy, et. al., pp. 385, 395-397.

<sup>94</sup> For concurring assessments that British firepower was the decisive element in tactical engagements throughout the war, see Arthur, pp. 161, 296; Bishop and Witherow, p. 27; Cordesman and Wagner, p. 373; Hastings and Jenkins, pp. 244-249. For evidence of the decisive role of British firepower in the various ground battles, see Arthur, pp. 144, 154-155, 159, 161, 197-198, 296; Bishop and Witherow, pp. 93-94, 124, 140; Cordesman and Wagner, pp. 284, 327-328; Eddy, et. al., pp. 248-249, 250-251, 253; Freedman and Gamba-Stonehouse, pp. 146, 373; Hastings and Jenkins, pp. 294-295; Middlebrook, pp. 191-192, 257-258; Moro, 265, 306; Thompson, pp. 81, 133, 151-152.

<sup>95</sup> Cordesman and Wagner, p. 373.

<sup>96</sup> Bishop and Witherow, p. 140.

<sup>97</sup> Bishop and Witherow, p. 27; Hastings and Jenkins, pp. 244-249; Middlebrook, p. 235; Thompson, p.

### **Argentine Military Effectiveness and Arab Military Effectiveness**

The Argentine case illustrates the limitations of the politicization theory as an explanation for Arab military ineffectiveness. The Argentine armed forces of the late 1970s and early 1980s were, in many ways, the quintessential politicized military, suffering from praetorianism, palace guardism and commissarism. The Argentine military in the Falklands performed very close to the "model" predicted by the politicization theory, yet there was little resemblance between the performance of the Argentine military in combat and that of the Arab armed forces between 1945 and 1991.

The greatest problems the Argentines experienced were not those most damaging to Arab operations, and often were not problems for the Arabs at all. Poor morale, an inadequate logistical system, and terrible unit cohesion were three of the most debilitating problems plaguing the Argentine forces in the Falklands, yet these were almost never areas of difficulty for the Arabs, and often were areas of great strength for them. On the other hand some of the greatest problems the Arabs faced on the battlefield were not problems for the Argentines at all. The Argentines proved to be very capable in air operations, they were very attentive to tactical intelligence, and had a fairly able junior officer corps that showed initiative, improvisation, and a capacity for independent action. In short, the Argentines suffered very little from the problems with tactical leadership that were the bane of Arab militaries during the postwar era. For the most part, the only real problems Argentina experienced among tactical commanders was the inadequate attention paid to training by many Argentine junior officers.

In other areas, the contrast between the Argentines and the Arabs is not quite so stark, but is still significant. Factionalism and interservice rivalry literally crippled the Argentine forces. Although these problems were present to a greater or lesser extent in all of the Arab armed forces, they were never as problematic as in the Argentine case.<sup>98</sup> Likewise, the negligence of Argentine officers who were too distracted by politics to train their forces was a serious problem when combat was joined. By contrast, Arab officers likewise neglected proper training at different times, but the fact that their crucial problems did not abate even when they were extremely diligent about training demonstrated that simple negligence was not a decisive problem as it was for the Argentines. Argentine forces rarely demonstrated flawless combined arms coordination, but they performed far better than any of the Arab armies, except perhaps the Jordanians in 1948 and possibly the Syrian commandos in 1982.

Only in a few areas did Arab and Argentine forces appear to experience the same problems in combat. In particular, there was an important similarity in a number of aspects pertaining to strategic leadership. Argentine generalship was abysmal and was one of the most important reasons for Argentina's defeat in the Falklands. Although there was no consistent pattern of poor generalship across the entire sample of Arab armed forces, as pointed out in Chapter 11, there was a pattern of poor generalship in heavily *commissarist* Arab armed forces. In addition, both the Argentines and commissarist Arab militaries experienced problems with strategic intelligence, unit and service coordination, dysfunctional chains of command, and debilitating rotational policies that almost certainly can be traced to the politicization of both armed forces. Thus the strategic leadership and command and control problems of commissarist Argentina did match those of commissarist Arab militaries.<sup>99</sup>

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144.

<sup>98</sup> The one possible exception to this rule is the case of Syria in 1970 when Asad's refusal to commit the Syrian Air Force to the battle probably doomed their invasion of Jordan.

<sup>99</sup> However, in other cases, very different factors created patterns of behavior only superficially alike. For instance, both the Arab armies and the Argentines suffered from distorted information flows. But in the Argentine case this was the result of political infighting and mostly affected the flow of information laterally and downward, from the top to the lower ranks. By contrast, the Arab militaries experienced this

There were also certain similarities between the Argentines and all of the Arab militaries in several categories of military effectiveness related to technical skills and familiarity with machinery. Both the Arabs and Argentines were plagued by inadequate equipment maintenance and poor repair practices. Both the Arabs and Argentines preferred a very slow pace of operations and had great difficulty dealing with an adversary able to operate at a more rapid tempo. Although the Argentines were clearly better than the Arabs--and enjoyed some notable successes--Argentina's ability to provide technical support to its armed forces and formulate technical solutions to military problems was somewhat limited.

These exceptions notwithstanding, it was generally the case that Argentine military performance conformed to the predictions of the politicization theory, but had little in common with the broad patterns of Arab military effectiveness. This is not to say that the Argentine military was somehow better than the Arab armies, just that they fought differently. For instance, it is difficult to say whether Argentine tactical formations fought better than Arab tactical formations. They probably did, but if they did, it was not by much. What is clear is that the reasons Argentine tactical formations fought poorly were very different from the reasons Arab tactical formations fought poorly. Argentine formations were weak in combat because their troops were largely untrained, poorly supplied and demoralized. Their officers held them in contempt and so they fled or surrendered whenever they could and disobeyed orders in battle. Even when Argentine troops followed their officers' lead, neither they nor their commanders had trained enough to execute their operations properly. On the other hand, Arab tactical formations were weak in combat because their commanders were passive, inflexible and unwilling to act without explicit orders from high authority. They could not understand combined arms interactions nor did they attempt to maneuver for advantage on the battlefield. They handled their aircraft, artillery and other heavy weapons in an simplistic and formulaic fashion and could not conduct operations well that had not been planned and practiced long in advance. Unlike the Argentines, Arab forces frequently were highly motivated, well-supplied and obedient to their officers. They had excellent unit cohesion and spent months and even years practicing specific military skills for impending operations. Unlike the Arabs, Argentine junior officers were aggressive, creative, flexible, willing to maneuver in battle, and able to quickly reformulate operations in response to unexpected developments.

As a final note, there were several categories of military effectiveness where Arab performance seemed to conform more closely to the predictions of the theory than did Argentine performance. In every one of these case, these results were either spurious or else categories of little importance to the predictions of the theory. For example, the Arabs consistently manifested very poor combined arms operations--in conformity with the predictions of all three variants of the theory--while the Argentines did reasonably well. This is misleading, because it is a central tenet of all three variants of the theory that poor combined arms operations should be the product of inadequate or misdirected training. Although their combined arms were clearly superior to the Arabs, the Argentines did suffer from inadequate training while the Arabs generally did not. With adequate training, the Argentines probably would have done even better. The Arab armies experienced repeated difficulties with combined arms regardless of how hard they trained. Some Arab armies (such as Iraq's Republican Guard and Syria's armor and mechanized divisions) practiced combined arms constantly but could never get it right in battle. The exact same phenomenon is responsible for the apparent anomalies regarding tactical maneuver, where the Arabs seem to have fulfilled the predictions of the palace guard variant, and the Argentines appear to have contradicted it. Upon closer examination, it becomes clear that it was the Arabs who contradicted the predictions of

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problem regardless of the extent of factionalism--or even politicization--and the greatest problems were from the bottom up.

**Table 15a. Predictions of the Politicization Theory Compared to Arab Military Effectiveness 1945-1991 and Argentine Military Effectiveness.**

Prediction	Politicization of the Military			Argentine Performance	Arab Performance
	Commis sarism	Praetor ianism	Palace Guardism		
Tactical creativity				Adequate	Poor
Strategic creativity	Poor			Poor	Uneven
Information flows	<b>Poor</b>	<b>Poor</b>		<b>Poor</b>	<b>Poor</b>
Tactical initiative				Good	Poor
Strategic initiative	Poor			Poor	Uneven
Centralization/Delegation	<b>Poor</b>			<b>Poor</b>	<b>Poor</b>
Simplicity of Chain of Command	Poor			Poor	Uneven
Tactical use of maneuver			<b>Poor</b>	Good	<b>Poor</b>
Strategic use of maneuver	Poor		Poor	Poor	Uneven
Employment of armor			<b>Poor</b>	--	<b>Poor</b>
Employment of artillery			<b>Poor</b>	Adequate	<b>Poor</b>
Air-to-air combat skills	<b>Poor</b>		<b>Poor</b>	--	<b>Poor</b>
Air-to-ground operations	<b>Poor</b>		<b>Poor</b>	Good	<b>Poor</b>
Ad hoc operations	<b>Poor</b>		<b>Poor</b>	Uneven	<b>Poor</b>
Set-piece operations	Poor		Poor	--	Adequate
Combined arms	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	Adequate	<b>Poor</b>
Unit cohesion	Poor	Poor		Poor	Good
Personal Bravery	Poor			Poor	Good
Maintenance and repair				<b>Poor</b>	<b>Poor</b>
Assimilation of equipment				Adequate	Poor
Logistics				Poor	Uneven
Combat engineers				--	Good
Technical support				Adequate	Poor
Tactical intelligence				Good	Poor
Strategic intelligence	Poor			Poor	Uneven
Operational Security				Poor	Good
Tactical leadership			Uneven	Adequate	Poor
Strategic leadership	Poor		Uneven	Poor	Uneven
Ability to Plan and Execute Complex Operations	Poor			Adequate	Uneven
Officer rotations	Excessive			Excessive	Unclear
Morale (at start of the war)	Poor	Poor	Poor	Poor	Adequate
Attention to training		Poor		Poor	Uneven
Emphasis of training			Misguided	Misguided	Adequate
Ability of soldiers to benefit from military training				--	Poor
Preferred operational tempo				<i>Slow</i>	<i>Slow</i>
Attention to offensive operations				<i>Adequate</i>	<i>Adequate</i>
Attention to defensive operations				<i>Adequate</i>	<i>Adequate</i>
Attention to air superiority				Adequate	Uneven
Unit and service coordination	<b>Poor</b>	<b>Poor</b>		<b>Poor</b>	<b>Poor</b>
Willingness to take casualties				Unclear	Low

A blank square indicates that the theory does not necessarily make a prediction in this category.

A double dash (--) indicates that inadequate information was available to make a judgment in this category.

Results in **bold** indicate categories in which Arab military effectiveness conformed to the predictions of the politicization theory, at least superficially. Results in *italics* indicate categories in which Arab military effectiveness conformed to Argentine military effectiveness, at least superficially. The politicization theory predicts that **both** Arab military performance and Argentine military performance should conform to the patterns predicted by the theory. In other words, it predicts that there should be many lines on this chart where the results are in both italics and bold.

the theory, which again maintained that the absence of tactical maneuver ought to have been the result of inadequate training. Since some Arab armies trained constantly and still experienced the same problems, Arab military performance cannot be said to have fulfilled the predictions of the theory.

### **Conclusions**

Once again the results of the two parts of this critical test confirm the initial conclusions drawn from the congruence tests in Part III. The Arab-culture theory has considerably greater explanatory power than do any of the variants of politicization of the military. Commissarism can claim to have had a fair degree of influence on certain aspects of the Arab military experience. However, neither praetorianism nor palace guardism appear to have much ability to explain Arab military performance during the postwar era.

The results of this critical test strongly supported the Arab culture theory over the various flavors of politicization. If politicization had been the main culprit, there should have been a dramatic improvement in Iraqi military fortunes after the process of depoliticization, but general patterns of Arab military effectiveness should have conformed closely to those of heavily-politicized Argentina. In direct opposition, the Arab-culture theory posited that Iraqi military effectiveness should have remained relatively unchanged despite the fluctuations in politicization, while Arab and Argentine military performance should have differed considerably. The first part of this test revealed that Iraqi military effectiveness was notable for its constancy, showing an improvement essentially only in generalship, which in turn produced only a modest improvement in overall military effectiveness. Likewise, the second part demonstrated that Arab military performance diverged markedly from Argentine military performance. Thus both parts of the test conformed to the predictions of the Arab-culture theory and contradicted those of the politicization theory.

Still, it is important not to throw the baby out with the bath water. The results of this test did not overturn those results of Chapter 11 that indicated that commissarism, at least, did play a fairly significant role in Arab military fortunes. Indeed, to some extent this test reinforced that notion. It is incontrovertible that Arab generalship varied widely, and seemed to vary closely with changes in commissarist politicization. Indeed, the evidence suggests that the relationship between the caliber of Arab generals and the degree of commissarism imposed by the government is very close. Moreover, as noted in Chapter 11, generalship was a fairly important element in Arab military performance overall. The results of this test support these same conclusions. Iraqi generalship clearly improved with depoliticization, and from it followed a modest increase in overall military effectiveness. Similarly, Argentine generalship was rotten, and this mediocrity was clearly a result of the severe politicization of the Argentine armed forces.

Another way that the results of this test support the conclusion that commissarism did play a significant role in Arab military ineffectiveness could be found in the small number of categories of military performance in which the military history of both the Argentines and the Arabs conformed to the predictions of the politicization theory. Specifically, both the Arabs and Argentines experienced problems with strategic intelligence, unit and service coordination, dysfunctional chains of command, and debilitating rotational policies as predicted by the commissarist variant. Clearly then, while commissarism may not have been the primary cause behind the primary problems of the Arab militaries, it was not without influence.

To some extent, the results of this test do undermine the notion that politicization, particularly commissarism, has a secondary effect on junior officers. It is exceedingly difficult to detect any significant improvement in Iraqi tactical leadership after

depoliticization. Similarly, it is noteworthy that Argentina's tactical leadership did not experience the crippling problems that afflicted Arab junior officer ranks and that were the most detrimental to their war efforts. Nevertheless, it is inconceivable that there is not at least some "trickle-down" effect by which junior officers suffer from a milder version of the regime's scrutiny and loyalty requirements imposed so heavily at senior ranks. Culture, politicization, and military effectiveness are all nebulous variables that do not easily lend themselves to measurement. Consequently, while this "trickle-down" effect probably is not a major influence in politicized militaries--as the theory acknowledges--it may still be a lesser influence, but one which is too weak or too subtle for my methodology to detect. This being the case, I continue to believe that commissarism still played at least some role in the tactical leadership problems of the Arab armed forces.

The results of this test make it very difficult to make a case in favor of the influence of either praetorianism or palace-guardism on Arab armies. By the late 1980s there was no question that the Iraqi military had no praetorian role and that it was completely absorbed in trying to defeat Iran. Yet its military effectiveness showed only slight improvement, and this appears to have been almost entirely the result of Saddam's easing of commissarist pressures. On the other hand, the Argentines did suffer to a certain extent from both praetorianism and palace-guardism, but were not the same problems experienced by the Arabs. It is undoubtedly true that certain aspects of both praetorianism and palace guardism affected certain Arab militaries in certain situations, but the pattern of Arab military ineffectiveness has been a constant since 1945 and the occasional, modest influences of praetorianism and palace-guardism fail to register as significant compared to other factors. Therefore, although praetorian and palace guard influences could be said to have played some role in some Arab military campaigns, neither constitutes a very compelling explanation for the general pattern of Arab problems on the battlefield.

## Chapter 16

### Testing the Underdevelopment Theory Against the Arab-Culture Theory

In this chapter I present the last of the three competitive tests, this time comparing the underdevelopment theory to the Arab-culture theory to determine which better explains the military experience of the Arabs from 1945 to 1991. I begin by briefly recapitulating the findings of the congruence tests performed in Chapter 11 regarding the underdevelopment theory. Next, I examine the experience of the Jordanian military from 1948 to 1991, during which time Jordan underwent a significant increase in its socio-economic level.<sup>1</sup> This section therefore constitutes an instance in which culture remained constant while socio-economic development varied. In addition, I briefly note the extraordinary efforts of Egypt and Syria between 1967 and 1973 and Iraq in the late 1980s to improve the socio-economic level of their armed forces.

I then compare the experience of the Arab militaries in combat since 1945 with the experience of four non-Arab armed forces: the Chadians, the Chinese, the Argentines, and the Cubans. The congruence tests in Chapter 11 revealed that the underdevelopment theory was probably the strongest competitor with the Arab-culture theory as an explanation for Arab military ineffectiveness. This being the case, it is important to compare Arab military performance with that of as many other underdeveloped non-Arab states as possible to ensure accuracy in the results of the test. I have chosen to introduce two new cases--Chad in 1986-1987 and China from 1950 to 1979--as well as drawing on the two cases discussed in the previous two chapters--Argentina and Cuba--for this competitive test. All four of these countries were underdeveloped by any criteria during the periods under consideration, and China in 1950-1979 and Chad in 1986-1987 were as backward, or more so, than were the Arab countries at any time during the postwar era. Thus, this part of the chapter examines four instances in which culture is varied (by comparing Arab culture to Chadian, Chinese, Argentine, and Cuban cultures), but underdevelopment remains a constant for all. For this test, the Arab-culture theory predicts that there should be greater variance between the patterns of military effectiveness of the Arab armies and the non-Arab Third World armies than within the Jordanian military over the course of the postwar period as its society experienced considerable development. Conversely, the underdevelopment theory predicts greater variance in the Jordanian armed forces over the course of the postwar period than between the Arabs and the non-Arab Third World armies.

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<sup>1</sup> The Arab nations that have experienced the greatest macro-economic changes since the Second World War, the Persian Gulf oil kingdoms, have not necessarily experienced a corresponding increase in overall socio-economic level because of how they have channeled their revenues. For example, in most of the Persian Gulf States, educational and health standards do not reflect their greater GNPs. Consequently, using any of them as an example of a radical change in development would be an unfair test of the underdevelopment theory. They likely would fail the test, but since they have not undergone a real change in level of socio-economic development, this result would be deceptive. [On Arab socio-economic development, see Charles Issawi, *An Economic History of the Middle East*, (NY: Columbia University Press, 1982).]

## **The Underdevelopment Theory and Arab Military History: A Recapitulation**

The underdevelopment theory did quite well in the various congruence tests conducted in Chapter 11. While it did not perform as well as the Arab-culture theory, it clearly offered a very persuasive explanation of certain aspects of Arab military ineffectiveness between 1945 and 1991. The predictions of the underdevelopment theory were most strongly fulfilled in those categories of military effectiveness related to problems in Arab armed forces arising from limited technical skills and an inability to get maximum benefit out of their weapons. Moreover, these problems proved to be among the most damaging to Arab military operations generally, and the underdevelopment theory appeared to explain these problems as well or better than even the Arab-culture theory.

The greatest limitation of the underdevelopment theory was that it made few predictions regarding either tactical or strategic leadership. Tactical leadership turned out to be the single most important area of problems for the Arabs while poor generalship also played an important role in their defeats. The fact that underdevelopment offered little in understanding these phenomena was a problem for the theory.

### **Jordan, 1948-1991**

In 1945, the Kingdom of Transjordan was one of the poorest and most backward countries of the entire Middle East. The small population was dominated by Bedouin, the vast majority of whom had only given up nomadism and settled in towns in the last generation. The greatest source of revenue to the new monarchy was a subsidy from the British in return for a heavy influence over Amman's armed forces and foreign policy. Literacy was minuscule, and the country was so backward that few economic or social statistics are available for this period of Jordanian history.<sup>2</sup>

Between 1945 and 1991, Jordan underwent a considerable transformation. The Hashemite monarchy proved astute in encouraging economic development. In particular, they fostered education and supported indigenous business enterprises. Jordan got help in the form of financial aid from the US and other Western countries. At different times, Amman also received very substantial economic support from the Persian Gulf oil-monarchies for joining in the common fight against Israel, and then from Iraq for Jordan's aid during the Iran-Iraq War. Jordanian workers sought employment all over the Middle East, particularly in the oil kingdoms of the Persian Gulf, and sent home sizable remittances. Finally, the 1948 and 1967 Arab-Israeli wars brought huge numbers of wealthier and better-educated Palestinians into Jordan. While the Palestinians may have been a political nightmare for the regime, their capital, skills, and business acumen were a great boon to the economy.<sup>3</sup>

Consequently, by 1990, Jordanian society was one of the most developed in the Arab world in terms of its education-level, access to technology, and exposure to machinery and industrial production. (Table 16a below shows a comparison of Jordanian

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<sup>2</sup> Author's interviews with personnel at the Jordan Information Bureau, May 1995. On Jordanian backwardness, see Arthur R. Day, *East Bank, West Bank: Jordan and the Prospects for Peace*, (NY: Council on Foreign Relations, 1986), pp. 94-105; Daniel Lerner, *The Passing of Traditional Society: Modernizing the Middle East*, (London: The Free Press of Glencoe, 1958), pp. 303-306; Alan Richards and John Waterbury, *A Political Economy of the Middle East*, (Boulder, Colo: Westview, 1990), esp. pp. 208-209.

<sup>3</sup> Day, pp. 94-105; Richards and Waterbury, pp. 208-209.



socio-economic indicators in 1960 and 1990, as well as the same statistics for Egypt, Iraq, Syria, and Saudi Arabia in 1990). By 1984, Jordan's GNP per capita had more than doubled from its 1960 value, rising from \$780 to \$1,910 (both in \$1990). Thereafter, Jordan's GNP per capita declined as a result of the oil glut which diminished Persian Gulf subsidies and limited the work available for Jordanians in the oil kingdoms.<sup>4</sup> Nevertheless, socio-economic development continued to rise despite this drop-off in income. In 1990, Jordan's literacy rate, life expectancy, automobiles per capita, medical doctors per capita, electricity production per capita, and steel consumption per capita were among the highest in the Arab world (excluding the distorted economies of the Persian Gulf oil monarchies). Likewise, infant mortality and the percentage of the population engaged in agriculture was among the lowest in the Arab world. Indeed, by 1991 the World Bank considered Jordan a "Middle-Income Economy."<sup>5</sup>

Despite this fairly dramatic development in the social and economic spheres, Jordan did not see a corresponding increase in its military effectiveness. Jordanian forces continued to suffer from the same problems of limited initiative and improvisation, poor combined arms operations, and a general unwillingness to act independently on the part of junior officers. Tactical commanders were not very good about employing tactical maneuver to gain an advantage in battle. Jordanian armor and artillery skills remained mediocre and inflexible, and Jordanian units had great difficulty with operations other than static defenses and small, well-practiced set-piece attacks. Indeed, Jordanian military effectiveness actually appears to have declined somewhat since 1948 because of the loss of British officers and instructors and the thinning of Bedouin in the ranks.

The one area in which Jordanian skills showed progress was in their technical aptitude and weapons handling. There is little question that in 1948 most Jordanian personnel were incapable of flying an airplane, driving a tank, or firing a surface-to-air missile (SAM). By 1967-1973 Jordanian troops and officers were able to do all of these things fairly well as a result of the spread of education and machinery and the influx of the more sophisticated and better-educated Palestinians. By the late 1980s, the Jordanians could handle even more sophisticated weaponry than they could in 1967. Overall, Jordanian technical skills, their ability to maintain and repair weapons, and their ability to learn how to use sophisticated new systems all had improved by the start of the 1990s. Nevertheless, even in these categories, Jordanian abilities remained quite limited. Although better than in the past, Jordanian forces still could not take full advantage of the weapons and equipment at their disposal. For instance, in 1973, in combat with Israeli units employing the exact same equipment--Centurions and M-113s--the Jordanians were consistently beaten. Western observers familiar with the Jordanian military aver that this would undoubtedly be the case in the event of another Jordanian-Israeli clash.<sup>6</sup>

This pattern of military effectiveness only partially fulfills the predictions of the underdevelopment theory. Jordan experienced considerable socio-economic development between 1945 and 1991, yet its military effectiveness showed no real increase and if there was any change at all, it probably declined. Only in those categories of combat performance related to the extent of technical skills did the Jordanians show any real improvement. These findings reinforce the importance of socio-economic development in this area of military competence, as well as its lack of real impact in other areas of military effectiveness. Furthermore, the fact that Jordanian technical skills improved but overall Jordanian military effectiveness may have declined is further evidence that limited technical skills were not the most critical element of Arab military problems during the postwar period.

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<sup>4</sup> Day, pp. 94-109; Robert B. Satloff, *Troubles on the East Bank*, (NY: Praeger, 1986), p. 63.

<sup>5</sup> The World Bank, *World Development Report 1993*, (NY: Oxford University Press, 1993).

<sup>6</sup> Author's interviews with US military personnel, May 1993.

**Table 16a. Relative Jordanian Socio-Economic Status 1960-1990**

Socio-Economic Indicators	Jordan 1960	Egypt 1990	Iraq 1990	Jordan 1990	Saudi Arabia 1990	Syria 1990
GDP per Capita (\$1990)	780	720	1,940	1,700*	5,800	2,300
Literacy Rate (% of pop. over 15 able to read and write)	32	48	60	80	62	64
Infant mortality per 1,000 live births	140	80	84	38	59	45
Life Expectancy	47	61	63	69	68	67
% of workforce in manufacturing	26	20	22	20	28	32
% of workforce in agriculture	44	34	30	20	16	32
% of men of military age fit for military service	NA	65	56	71	56	56
Inhabitants per physician	5,900	1,320	1984: 1,740	770	700	1,160
Inhabitants per car	262	54	27	21	12	109
Inhabitants per telephone	67	25	28	44	10	27
Inhabitants per television	825	9	14	1980: 16	4	17
Electricity production per capita, in Kwh	59	820	430	1,150	3,300	680
Steel consumption per capita	>5	48	88	98	233	15
Population in millions	1.65	56.4	18	3.6	10-17	13.7

\* This is the 1988 figure.

Sources: CIA, *World Factbook*, 1989-1995; Rafic Boustani and Philippe Fargues, *The Atlas of the Arab World*, (Facts on File: 1990); UNESCO, *Statistical Yearbook*, 1992-1993; United Nations, *Statistical Yearbook*, various years; The World Bank, *World Development Report*, 1990-1995.

These same findings conform more closely to the predictions of the Arab-culture theory. As this theory predicted, Jordanian military effectiveness changed little despite the considerable changes in its socio-economic level. The fact that Jordan's problems in those areas related to tactical leadership and information management did not abate reinforces the theory's contention that these phenomenon can only be adequately explained by patterns of behavior derived from the dominant Arab culture. Finally, the fact that Jordanian technical skills improved somewhat, but not dramatically, suggests that even in this area of military performance, socio-economic development was probably not the only force at work and cultural influences almost likely played a role.

### **Related Evidence from the Egyptian, Iraqi, and Syrian Cases**

When Egypt, Iraq, and Syria faced their greatest military challenges they saw their low-levels of socio-economic development as an impediment and attempted to correct it. In all three cases, their solution was to draft large numbers of college students and graduates (who previously had been exempted from military service) and large numbers of engineers and other men with technical skills. Their intention was to dramatically increase the level of socio-economic development of their military without necessarily having to improve that of society as a whole. Thus, the Egyptian and Syrian armies of 1973 and the Iraqi army of the late 1980s were better educated and more technically skilled than ever before. The results of these efforts were very impressive. For example, in 1973, the Egyptian Army boasted 800,000 men, of whom 110,000 had university degrees--a fantastic proportion for any army. Beyond this, by the start of the October War, half of the engineers in Egypt were serving in the armed forces, most in the air force and air defense force.<sup>7</sup> Consequently, the Egyptian, Iraqi and Syrian militaries at these times boasted officer corps that were far better educated, healthier, and more familiar with modern machinery than the rest of their populations. Indeed, in terms of crude socio-economic level statistics, they probably were on a par with Western armies. Given these circumstances, the underdevelopment theory would predict that these militaries should have demonstrated considerably better military effectiveness than other Arab armies and air forces. On the other hand, the Arab-culture theory predicts that since the educational method had not changed--only the level of education attained by the Arab personnel--there likewise should be little difference in the military effectiveness of these armed forces and other Arab militaries.

Despite these remarkable increases in the socio-economic level of their soldiers and officers, these armies did not enjoy any dramatic increase in military effectiveness. Indeed, the better performance of their armies can be attributed almost entirely to the advantages of surprise, overwhelming numbers (and chemical warfare in the case of Iraq) and the meticulous scripting of combat operations that obviated the need for tactical commanders to exercise independent judgment. The fact that the military effectiveness of the tactical forces had changed little if at all is again betrayed by those instances when these Arab armies were forced to conduct operations without the benefit of the detailed planning of their capable general staffs, such as the Egyptian attacks on 14 October 1973, Syrian operations after about 7 October 1973, and Iraqi operations against the Coalition offensive during the Persian Gulf War. In each of these cases, once the Arab armies had lost surprise, their huge numerical disparity, and the ability to rely on their well-rehearsed scripts they reverted back to their previous patterns of behavior, with little if any signs of any improvement.

These results support the Arab-culture theory but not the underdevelopment theory. The failure of Arab officer corps to perform better despite impressive levels of education suggests that the educational method is far more important than the level of education of military personnel. This explanation accords well with the Arab-culture theory, which posits that Arab educational methods foster patterns of behavior detrimental to modern military operations. Thus, greater education levels would not be expected to produce better military effectiveness: only a different educational method would be expected to do so. It directly contradicts the underdevelopment theory, which fails to recognize that not all educations are the same, that education is highly sensitive to cultural influences, and therefore, that how an individual is taught is more important than whether that individual attains a primary, secondary or university-level education.

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<sup>7</sup> Mohamed Heikal, *The Road to Ramadan*, (NY: Ballantine Books, 1975), p. 35; Lt. General Saad El Shazly, *The Crossing of the Suez*, (San Francisco: American Mideast Research, 1980), p. 21.

### **Chadian Military Effectiveness, 1986-1987**

A comparison of Arab military performance 1945-1991 with the Chadian military experience in 1986-1987 reveals vast differences in military effectiveness between Arab and non-Arab forces despite comparable levels of socio-economic development. To put it bluntly, even in the late 1980s, Chad was dirt poor. In 1985, it achieved the unfortunate distinction of being the poorest country on earth. Chad in 1990 was considerably more backward than any of the Arab countries examined in Part II had been thirty years earlier. (See tables 16b and 16c toward the end of this chapter for a comparison of Chadian socio-economic indicators for 1990 with those of the Arab states in both 1960 and 1990) Chad's 1990 GNP per capita was roughly one-third that of Egypt in 1960, and one-fifth that of Iraq in 1960. In terms of familiarity with machinery, Chadians in 1990 were two, three, or even six times less likely to own a car, a telephone, or a television than the Arab populations were in 1960. Chadian electricity production in 1990 was one-quarter to one-eighth that of the various Arab states in 1960. Despite this extreme backwardness, the performance of Chadian forces against the Libyans in 1986-1987 shows few of the same patterns of military ineffectiveness that characterized Arab operations 1945-1991.<sup>8</sup> Indeed, the Libyans fought almost exactly as their Egyptian, Iraqi, Jordanian, Saudi, and Syrian brethren and were decisively defeated because Chadian forces were almost polar opposites of the Libyans in terms of their combat capabilities.

#### **Chadian Military Operations Against Libya, An Overview**

In 1971, soon after the coup that brought Muammar Qadhafi to power in Tripoli, Libya began to meddle in Chadian affairs. The new Libyan regime claimed the Aouzou strip, the northernmost region of Chad, which borders Libya. The Aouzou strip was rumored to be rich in oil and strategic minerals and there was enough ambiguity in the colonial history to give Libya a claim against the territory. In 1973, Libya began sending military forces to aid those Chadian factions friendly to Tripoli.<sup>9</sup> In particular, Chad's minority Arab population strongly supported Libya. In addition, Qadhafi was able to find elements of the northern Toubou (or Gourane) peoples willing to back him in return for his support against their rivals for control of Chad.<sup>10</sup>

In the early and mid-1970s, Libyan forces fighting in Chad did not enjoy any particular success in battle. They lost as many battles as they won and Libyan forces added little to the combat power of their Chadian allies. However, in the late 1970s, Libya began to acquire large quantities of Soviet military equipment which it committed to the fighting in Chad. Although the Libyans were entirely inept with their new tanks, armored personnel carriers (APCs), artillery pieces, and jet aircraft, this arsenal terrified their Chadian opponents. These weapons completely altered the balance of power in Chad, giving Libya almost total dominance over the poorly-armed Chadian tribesmen.<sup>11</sup>

By 1980, the struggle for power in Chad focused on two Toubou-dominated

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<sup>8</sup> Central Intelligence Agency, *World Factbook*, 1989-1995 editions, (Washington, DC: GPO); Rafic Boustani and Philippe Fargues, *The Atlas of the Arab World*, (Facts on File: 1990); The World Bank, *World Development Report*, 1990, (NY: Oxford University Press, 1992).

<sup>9</sup> Jonathan Bearman, *Qadhafi's Libya*, (London: Zed Books, 1986), p. 203.

<sup>10</sup> The Toubou/Gouranes of northern Chad practiced a heavily-Sufi version of Islam, but they did not share Arab cultural or linguistic patterns. Culturally and ethnically they were considered black Africans. The Toubou, along with the Zaghawa were considered the best warriors in Chad, and along with the Afghans, have been called the "last of the warrior tribes." Prior to the Libyan intervention, the Gouranes and Zaghawa completely dominated the southern tribes in battle. Even in the late 1980s, the best units and field commanders in the Chadian army were still mostly Gouranes and Zaghawa. Bearman, pp. 204-210; John Wright, *Libya, Chad and the Central Sahara*, (Totowa, NJ: Barnes and Noble Books, 1989), pp. 18-19; and author's interviews with US government officials, September 1995.

<sup>11</sup> Bearman, p. 215; and author's interviews with US government officials, September 1995.

coalitions. That of Hissein Habré was supported by the French, while the Government d'Union Nationale de Transition (GUNT) of Goukouni Oueddei was supported by the Libyans and included the Chadian Arab "Volcan" army. In early 1980, Habré was able to take power in N'djamena. In response, Libya and the GUNT launched a full-scale invasion of Chad. The Libyans sent 7-9,000 troops--including many of Tripoli's elite commando units--equipped with armor, artillery, multiple-rocket launchers (MRLs), and airpower. They were joined by 7,000 GUNT fighters and were opposed by only 4,000 troops of Habré's Force Armée Nationale Tchad (FANT). Between their firepower and overwhelming numbers, the GUNT/Libyan coalition quickly overran the country, forcing Habré to flee to Sudan. In this invasion, the Libyans and the GUNT were able to drive several hundred kilometers and seize N'djamena quickly because FANT units broke and ran without a fight whenever they faced Libyan armor and airpower.<sup>12</sup>

Between 1980 and 1986, control of the country see-sawed back and forth between the FANT and the GUNT. Under international pressure, Libya removed its troops from Chad, leaving the GUNT in command. Meanwhile, Habré rebuilt the FANT with US aid and in June 1982, with the Libyans gone, he attacked and overthrew Goukouni and the GUNT.<sup>13</sup> Goukouni and his forces fled to Libya, only to return with another Libyan invasion force in June 1983. The Libyans and the GUNT defeated a weak Chadian counterattack in the north and then Libyan firepower smashed the FANT at Faya Largeau on 25 June, killing 700 of Habré's troops. This time, Habré, as the recognized head of state, called on French aid to repel Libyan aggression. The French responded by sending 3,000 paratroopers and several squadrons of fighter-bombers. With French planes keeping the Libyan air force grounded, Habré rallied his army, stopped the GUNT advance, and then counterattacked and recaptured Faya Largeau. Thereafter, the fighting bogged down because the FANT could not handle Libyan armor and artillery without direct French participation, to which Paris would not agree.<sup>14</sup> With the fighting deadlocked, the French struck a deal with the Libyans in September 1984, by which both sides would withdraw from Chad and international mediators would negotiate a peaceful settlement. While the French pulled out completely as agreed, the Libyans staged a mock withdrawal and successfully hid 7,000 troops and their equipment in northern Chad.<sup>15</sup>

### *The Events of 1986*

Perhaps the most critical development of 1986 for the Libya-Chad conflict was the evolving US attitude toward Libya. Throughout the early 1980s, the United States, under the conservative administration of Ronald Reagan, had grown increasingly bellicose toward Libya, and increasingly willing to support Habré's FANT as Libya's enemy in Chad. In 1986--the year of the US airstrikes against Libya--the US greatly increased its aid to the FANT providing arms, money, intelligence, supplies, and diplomatic support. The Western powers provided the FANT more powerful weaponry, more training, and extensive logistics support to Habré's army. To their credit, Habré and his subordinates recognized which equipment would be useful to them and what would

<sup>12</sup> Bearman, p. 217; Raymond W. Copson, *Africa's Wars and Prospects for Peace*, (Armonk, NY: M. E. Sharpe, 1994), pp. 62-63; Mark A. Lorell, *Airpower in Peripheral Conflict, The French Experience in Africa*, RAND R-3660-AF, (Santa Monica, Ca: RAND, Jan. 1989), pp. 38-39; Jean R. Tartter, "National Security," in Helen Chapin Metz ed., *Libya: A Country Study*, (Washington, DC: GPO, 1989), pp. 248-250; Keith Somerville, *Foreign Military Intervention in Africa*, (London: Printer Publishers, 1990), pp. 67-68; and author's interviews with US government officials, September 1995.

<sup>13</sup> Bearman, p. 220; Copson, p. 63; Somerville, p. 67; Tartter, (Libya), p. 250.

<sup>14</sup> Bearman, p. 222; Copson, pp. 63, 126; Lorell, pp. 41-46; Somerville, pp. 69-70; Tartter, (Libya), pp. 250-251; Jean R. Tartter, "National Security," in Thomas Collelo ed., *Chad: A Country Study*, (Washington, DC: GPO, 1990), pp. 192-193.

<sup>15</sup> Colin Legum ed., *Africa Contemporary Record, 1985-1986* [hereafter referred to as "ACR" with appropriate years], (NY: Africana Publishing Co., 1987), p. B201; Lorell, p. 49; Somerville, p. 71;

simply be a hindrance. They declined offers of tanks, APCs and heavy artillery and instead requested light armored cars, trucks, automatic weapons, grenade launchers, recoilless rifles, mortars, anti-tank weapons and anti-aircraft weapons. In particular, the Chadians asked for large numbers of US Redeye shoulder-launched SAMs and French Milan anti-tank guided missiles (ATGMs).<sup>16</sup>

The FANT's new capabilities were first revealed when the GUNT and the Libyans made another bid to overrun the country. Early in 1986, the GUNT and the Libyans launched a major drive south from their positions in north-central Chad with 5,000 GUNT soldiers and 5,000 Libyans backed by armor and airpower. On 10 February, GUNT/Libyan forces took Kouba Olonga and Oum Chalouba. The FANT quickly regrouped and counterattacked, crushing the GUNT/Libyan units at Oum Chalouba and retaking the town on 14 February. The Libyans tried to renew their offensive in March, but were again bloodily repulsed by FANT units. At that point, the French, humiliated by Libya's false withdrawal in 1984, dispatched 2,000 troops plus several air force squadrons to Chad. Although the French would not join the Chadians in a counteroffensive, they began conducting airstrikes against Libyan airbases in Chad, ostensibly to suppress the Libyan Air Force while French troops and supplies were airlifted into the country. Their unexpected reversals on the ground at the hands of the Chadians, plus the French airstrikes, prompted the Libyans to call off the invasion and retreat north.<sup>17</sup>

Soon after their defeat in March, the Libyans and the GUNT fell to squabbling amongst themselves. In August 1986, Goukouni's Toubou fighters split from the Libyans and retreated to their strongholds in the Tibesti mountains of northwest Chad. The GUNT coalition disintegrated with Goukouni renaming his forces the Forces Armées Populaires (FAP), leaving only the 3,000 Chadian Arabs of the Volcan army with the Libyans. In December 1986, the Libyans attacked the FAP in the Tibesti. The Libyans sent a brigade-sized force with about 2,000 men plus T-62s and heavy air support against the 1,500-2,000 FAP irregulars in the Tibesti. Habré seized this golden opportunity and pledged to aid Goukouni against the Libyans, thereby uniting virtually the entire Chadian population against Tripoli.<sup>18</sup>

#### *The Chadian Offensive of 1987*

In early January 1987, Habré launched a two-pronged attack against the Libyans in northern Chad. He sent one force northwest to reinforce Goukouni's FAP in the Tibesti, and sent another, larger force into north-central Chad to hit the Libyan garrisons there. At that time, Libya had nearly 7,000 troops with 300 T-62 and T-55 tanks, BMP-1 APCs, Mi-24 Hind helicopter gunships, and 60 combat aircraft in northern Chad. Habré could call on 10,000 regulars armed and trained by the French as well as another 15-20,000 irregulars. These troops had about 70 Panhard and V-150 armored cars plus roughly 400 Toyota trucks with machine guns, recoilless rifles, grenade launchers, and Milan ATGM launchers mounted on them.<sup>19</sup>

In the Tibesti, the FAP-FANT coalition evicted the Libyans from Zouar in late January 1987. The Libyans regrouped and launched a set-piece attack to try to retake Zouar and Bardai but were defeated. Although the Libyans would never regain their

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<sup>16</sup> Copson, p. 127; Legum ed., *ACR, 1986-1987*, p. B187-189; Paul Lewis, "Libyans Said to Begin Retreating from Last Major Foothold in Chad," *The New York Times*, March 26, 1987, p. A1; Tarter (Chad), p. 183; Bernard Trainor, "France and US Aiding Chadians with Intelligence to Rout Libyans," *The New York Times*, April 3, 1987, pp. A1, A5; and author's interviews with US government officials, September 1995.

<sup>17</sup> Copson, pp. 126-127; Legum, *ACR, 1985-1986*, pp. B202-206; Legum, *ACR, 1986-1987*, pp. B186-187; Lorell, pp. 51-56; Somerville, p. 71; Tarter (Chad), p. 195.

<sup>18</sup> Legum, *ACR, 1986-1987*, p. B188, Lorell, pp. 57-59; Somerville, p. 73.

<sup>19</sup> Franziska James, "Habre's Hour of Glory," *Africa Report*, Sept-Oct 1987, p. 21; Legum, *ACR, 1986-1987*, pp. B190-191, B542; Somerville, 71-72; Tarter (Chad), p. 215.

position in the Tibesti they committed considerable airpower against Chadian towns and bases in the area and desultory ground fighting continued throughout the year.<sup>20</sup>

Habré's campaign in central Chad, however, was nothing short of astonishing. The Chadian commanders Hassan Djamous and Ahmed Gorou led a force of about 4,000 men against a series of Libyan fortified bases, boldly reducing one after another and crushing Libyan forces often twice the size of their own force. The Chadian offensive began with an attack on the Libyan garrison at Fada, which the FANT captured on 2 January 1987. Although there were 1,200 Libyan troops with armor and artillery in fortified positions around Fada, the Chadians conducted a series of swift pincer movements, enveloping the Libyan positions and crushing them with sudden attacks from all sides. The Libyans suffered 700 dead and lost large numbers of tanks and APCs.<sup>21</sup> The French took no part in the operation, but under pressure from Habré, they conducted an airstrike against the main Libyan airbase at Ouadi Doum that prevented the Libyan Air Force from playing much of a role in the battle.<sup>22</sup>

The crushing defeat at Fada stunned the Libyans. They had assumed that their heavy weapons made their garrisons virtually invulnerable to Chadian attack. They apparently had given little thought to developments in the FANT and failed to recognize the new firepower and mobility of Habré's forces. They had not counted on the ability of the Chadians to employ Milans and other powerful infantry weapons to neutralize their armor and air power. In response to this defeat, Qadhafi sent immediate reinforcements to Chad and began preparing more extensive augmentations of his force there.<sup>23</sup>

The capture of Fada led quickly to the fall of the main Libyan stronghold in central Chad at Ouadi Doum. Ouadi Doum was the next logical objective for the Chadians but it was garrisoned by a mechanized-brigade task force of roughly 6-7,000 men with 200-300 tanks and APCs. Moreover, it had all-around defenses as much as six kilometers wide at some points and an airbase with several squadrons of fighter-bombers inside the perimeter. The Libyans believed it impregnable and the Chadians felt it necessary to weaken the garrison both numerically and psychologically before attacking. Thus after they had consolidated their position at Fada, the FANT began harassing the Libyans in and around Ouadi Doum to try to goad them into launching a counterattack against Fada. In mid-March the Libyans took the bait and dispatched an armored-battalion task force to retake Fada. They stopped in the evening of 18 March near Bir Kora and went into laager. The Chadians surrounded the Libyans during the night, and at dawn on 19 March they attacked. The Chadians began by launching a diversionary attack on one side of the Libyan position, prompting the Libyans to shift their weight in that direction, at which point the Chadians unleashed their main attack against the other side of the Libyan lines. The Chadian main assault caved in half the Libyan line, at which point the Chadians fanned out and struck the other Libyan units from both front and rear. Cries for aid from the Libyans trapped at Bir Kora brought out another, similar-sized column from Ouadi Doum late that day. This relief force was surrounded and massacred by the Chadians in like manner on 20 March. In all, the Libyans suffered 784 dead, and lost 86 destroyed and 13 captured T-55s in the battles at Bir Kora.<sup>24</sup>

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<sup>20</sup> George Henderson, "Qaddafi's Waterloo," *Africa Report*, Sept.-Oct. 1987, p. 25; Lorell, p. 58; Somerville, p. 77.

<sup>21</sup> Western diplomats in Chad unanimously averred that the Chadians reported Libyan losses very accurately, although they had a tendency to downplay their own casualties. James Brooke, "Chadians Describe Victory in Desert," *The New York Times*, August 8, 1987, p. A5.

<sup>22</sup> Lewis, p. A5; Lorell, p. 58; Somerville, p. 74; Tartter (Chad), p. 196; Bernard Trainor, "France and US Aiding Chadians . . .," p. A5.

<sup>23</sup> Bernard Trainor, "Victories Shore up Chadians," *The New York Times*, January 18, 1987, p. A14; and author's interviews with US government officials, September 1995.

<sup>24</sup> James Brooke, "Modern Arms a Key Factor in Chadian Gains," *The New York Times*, April 2, 1987, p. A8; James, p. 21; Legum, *ACR, 1986-1987*, pp. B189-190; Lewis, p. A5; Lorell, p. 60; Somerville, p. 75;

Ouadi Doum was now ripe for Chadian attack. Although the garrison still boasted 4-5,000 men with ample armor and air support, the Libyans were badly demoralized by the massacre of their forces at Bir Kora. The Chadians decided to capitalize on this demoralization by striking quickly. On 22 March, Habré sent a force of about 2-3,000 men against the stronghold. The Chadians had carefully reconnoitered the position and had uncovered all of the Libyan weak points, including pathways through the extensive minefields. On 22 March, the Chadians attacked Ouadi Doum. The hardest part of the fight was breaching the initial Libyan defenses, but the Chadians attacked simultaneously from two sides and blasted their way through the Libyan lines. The Libyans were slow to commit their reserves, allowing the Chadians to penetrate Libya's forward defenses and fan out before their breakthroughs could be sealed. According to Lt. General Bernard Trainor who served as a military correspondent with the Chadians, between the unexpected routes taken by the Chadians and the speed of their advance, the Libyans were incapable of reacting and not one Libyan artillery round was fired during the entire battle. In four hours, the Chadians defeated the garrison and overran the entire base.

The Libyans regrouped to some extent that night and launched a sloppy and uncoordinated but very determined counterattack the next day. However, since they had lost or abandoned most of their equipment the previous day, this counterattack was smashed by the FANT, leaving the base in Chadian hands. Libyan airpower had little impact because the Chadian Redeyes forced them to remain above 15,000 feet where they could do little against the dispersed formations of fast-moving Chadian trucks. In all, the Libyans suffered 1,269 dead and 438 taken prisoner while losing over 200 tanks and APCs, 20 L-29 light aircraft, four Mi-24s, and several SA-13 and SA-6 batteries.<sup>25</sup>

The loss of Ouadi Doum and its garrison forced a major shift in Libyan operations in Chad. First, the Libyans were forced to abandon central Chad. The loss of Ouadi Doum and Fada left Faya Largeau and other Libyan garrisons extremely vulnerable to being cut-off by Chadian forces from east and west. Consequently, the Libyans fell back to their strongholds in the Aouzou strip. Second, Tripoli began a massive reinforcement effort sending troops and equipment south to try to stop the Chadian offensive. By the spring of 1987, Libya had built up its forces in the Aouzou strip to 12-13,000 troops, over one-third of the entire Libyan army. To make up for the loss of Ouadi Doum, the Libyans also built a massive new airbase at Maatan as-Sarrah in southern Libya.<sup>26</sup>

The Chadians launched their offensive against the Aouzou strip in late July 1987. The FANT began by retaking Libyan-held positions in the Tibesti. In early August, the Libyans put together a counteroffensive of reinforced-brigade strength. The Chadians met the Libyan force at Oumchi, 80 km south of Aouzou, where the Chadians demolished the Libyan armored formations as they had at Bir Kora. The Chadians aggressively pursued the defeated Libyans, overrunning Aouzou oasis on 8 August without much of a fight. At Oumchi and Aouzou the Libyans suffered 650 killed, 147 taken prisoner, and

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Tartter (Chad), p. 196; Bernard Trainor, "Desert Tactics of Chadians: Like Old West," *The New York Times*, April 5, 1987, p. A4.

<sup>25</sup> James Brooke, "Libyan Jets Bomb Chadian Units," *The New York Times*, March 31, 1987, p. A8; Brooke, "Modern Arms a Key . . .," p. A8; Henderson, p. 25; James, p. 21; Scott Kraft, "Chad Victory over Libyans a Major Setback for Kadafi," *The Los Angeles Times*, March 25, 1987, p. A1; Legum, *ACR, 1986-1987*, p. B190; Legum, *ACR, 1987-1988*, p. B181; Lewis, p. A5; Lorell, p. 60; Elaine Sciolino, "Chad Takes Another Key Libya Base," *The New York Times*, 28 March 1987, p. A3; Tartter (Libya), p. 251; Tartter (Chad), p. 196; Trainor, "France and US Aiding Chadians . . .," p. A5; Trainor, "Desert Tactics of Chadians . . .," p. A4; Bernard Trainor, "In the Desert, Chad Exhibits Spoils of War," *The New York Times*, April 13, 1987, pp. A1, A12; author's interviews with Lt. General Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>26</sup> James, p. 21; Legum, *ACR, 1987-1988*, p. B180; Lewis, p. A1; Lorell, p. 60; Sciolino, p. A3; Bernard Trainor, "Chad's Anti-Libya Offensive: Surprising Successes," *The New York Times*, January 12, 1987, p. A3; Trainor, "France and US Aiding Chadians . . .," p. A5.



lost at least 30 tanks and APCs.<sup>27</sup>

Qadhafi would not abide the loss of Aouzou and made a major effort to recapture it. He dispatched further reinforcements to the Chadian front until there were roughly 15,000 Libyans pitted against the FANT. He also sent 'Ali ash-Sharif, his best general, south to organize a counteroffensive to retake Aouzou. Libyan artillery and airstrikes began to soften up the Chadian positions at Aouzou days before the counterattack. Considerable Libyan airstrikes also were allocated in support of the battle. On 14 August, the Libyans attacked and were decisively defeated, suffering over 200 dead and captured. The Libyans regrouped, and five days later attacked again, only to be defeated once more. After these two reversals, 'Ali ash-Sharif concentrated even greater firepower and brought in commando units, as well as formations from the elite Jamahariyah Guard, for one last try. Relying on these elite units and tremendous firepower, the Libyans finally retook Aouzou in a set-piece assault on 28 August. In this final attack, the Libyans also benefited from the fact that Chad's key battlefield commanders--plus most of the Chadian forces previously defending the town--had fallen back from Aouzou to prepare for other operations. This left the town with a garrison of only about 400 men led by a novice commander who deployed his small force very poorly. Still, the fighting for the Aouzou strip cost Libya 1,225 dead and 262 wounded.<sup>28</sup>

Habré too was determined to hang on to the Aouzou strip and immediately after the loss of Aouzou oasis to the Libyans he began to take steps to regain it. Habré and his subordinates concluded that the key to eventual Libyan success at Aouzou was the heavy air effort they had made there. To remove the threat of Libyan airpower before they renewed their offensive against the Aouzou strip, the Chadians decided to first eliminate the Libyan base at Maatan as-Sarrah. In early September, Habré dispatched a FANT column under the personal command of Hassan Djamous to drive 200 kilometers into Libya and obliterate the airbase. The Chadian force carefully followed the wadis and so came upon the base undetected. On 5 September, the Chadians attacked and took the Libyans there completely by surprise. Although Maatan as-Sarrah had a 2,500-man defense force with nearly a brigade of tanks, artillery and extensive fortifications, the Chadians quickly smashed the astonished and slow-reacting Libyan defenders. They took control of the airbase, demolished it and all of the equipment they could not carry back with them, and then departed on 6 September. In the raid the Chadians killed over 1,700 Libyans, captured another 300, destroyed 26 Libyan aircraft, 70 tanks, 30 APCs, and numerous SAMs, radars, and electronic equipment. The FANT suffered 65 dead and 112 wounded.<sup>29</sup>

In some ways, the raid against Maatan as-Sarrah was too successful. The French were unsure of Chadian intentions and became concerned that the raid was a sign that Habré wanted to carry the war into Libya proper. Thus immediately afterward, Paris brought tremendous pressure against N'djamena, and virtually forced Habré to agree to a ceasefire before he could set in motion his offensive to retake the Aouzou strip.<sup>30</sup>

### **Patterns of Chadian Military Effectiveness**

Chadian forces fought brilliantly against the Libyans in 1986-1987. They were not without flaws, but their commanders recognized both the strengths and weaknesses of

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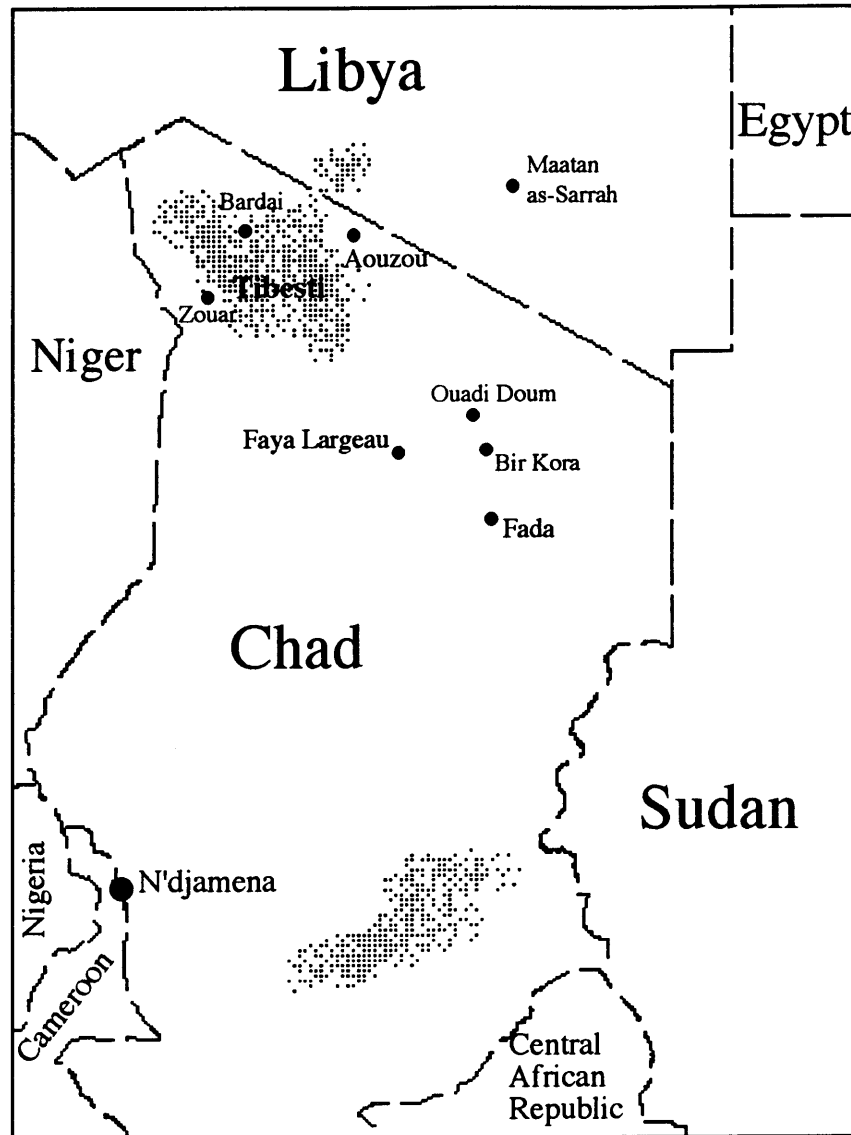
<sup>27</sup> Legum, *ACR, 1987-1988*, p. B181; Lorell, p. 61; Tartter (Chad), p. 197.

<sup>28</sup> James Brooke, "Chad Reports New Libyan Attack," *The New York Times*, August 15, 1987, p. A3; James Brooke, "Libya Reported to Retake a Key Chad Town," *The New York Times*, August 30, 1987, p. A4; Legum, *ACR, 1987-1988*, pp. B181-182; Lorell, p. 61; Somerville, p. 78; Tartter (Chad), p. 197; and author's interviews with US government officials, September 1995

<sup>29</sup> Steven Greenhouse, "Chad Says Troops are Razing Base Captured in Libya," *The New York Times*, September 7, 1987, pp. A1-A3; Legum, *ACR, 1987-1988*, pp. B182-183; Lorell, p. 61; Somerville, pp. 78-79; Tartter (Chad), p. 197.

<sup>30</sup> Legum, *ACR, 1987-1988*, pp. B182-183.

**Important Locations in the Chad-Libya Fighting, 1986-1987**



the forces at their disposal and built an army well suited to those characteristics. Not only was it the case that the strengths and weaknesses of Chadian forces were different from those exhibited by the Arab armies between 1945 and 1991, but they were almost polar opposites of one another. Indeed, the Libyans fought almost exactly like the other Arab armed forces of the postwar period, and were defeated principally because Chadian strengths were perfectly suited to exploiting the common Arab weaknesses displayed by the Libyans.

### *Explaining the Rise and Fall of Libyan Military Dominance in Chad*

One key to understanding Chadian military effectiveness in 1986-1987 is understanding the dynamics of the fighting between Chad and Libya in earlier periods of time. When the Libyans first intervened in the internecine struggle in Chad in the early 1970s, their military forces had little impact on the fighting. At that point, the war was mostly an infantry battle in which neither side was terribly skillful. The Chadians on both sides had tremendous difficulty modifying their traditional desert warfare tactics for massed infantry formations. For their part, the Libyans manifested all of the same problems common to the other Arab armies, leaving their units even more impotent than the Chadians. For the most part, the Libyans hung back from combat whenever possible and left most of the fighting to their GUNT allies.<sup>31</sup>

All this changed in the late 1970s when Libyan units began to appear in Chad with heavy infantry weapons, tanks, APCs, artillery, and airpower. The key problem for the Chadians was that they had no weapons capable of destroying armor or aircraft. Their heaviest weapons were light machine guns, and they mostly fought with just rifles and other individual weapons. They had no anti-tank or anti-aircraft weapons and no weapons with enough range to hit Libyan artillery. Without the tools to defeat Libya's heavy weapons, the Chadians could not stand up to them in combat. Consequently, the Libyans simply had to let loose with their artillery and airstrikes and then charge with their armor and the Chadians bolted. It made no difference that the Libyans proved incredibly incompetent with these weapons, that they could not hit anything with their guns or planes and could not maneuver with their tanks: the Chadians were terrified and fled from fear rather than actual effect.<sup>32</sup>

Thus in the early 1980s, Libyan forces completely dominated the fighting in Chad. The typical pattern was for Libyan units to deploy with equal numbers of GUNT troops. The GUNT soldiers served as the infantry element of the force, while the Libyan units were mostly armor and artillery backed by the Libyan Air Force. In addition, the GUNT forces provided nearly 100 percent of ground reconnaissance (although Libya provided some aerial reconnaissance). In combat, the GUNT would scout ahead and locate the enemy. The Libyans would then try to pulverize the enemy with their firepower, and on occasion might launch a tank charge directly at the enemy forces to try to break them up and put them to flight. Any real fighting that had to be done, however, was handled by the GUNT infantry while the Libyans stood back and provided fire support. Using these tactics, the Libyans spearheaded the GUNT invasions that overran the entire country in 1980 and its northern third in 1983 before being halted by French intervention and Habré's heroics.<sup>33</sup>

The military equation reversed itself in 1986. The first element of this change was the aid provided by the Western powers. With the Milan ATGM and the Redeye SAM, the Chadians finally had weapons that could take on Libya's tanks and aircraft. This knowledge gave the FANT the courage to stand and fight the Libyans. At that point,

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<sup>31</sup> Bearman, p. 215; and author's interviews with US government officials, September 1995.

<sup>32</sup> Author's interviews with US government officials, September 1995.

<sup>33</sup> Bearman, p. 217; Copson, pp. 62-63; Lorell, pp. 38-39; Tartter (Libya), pp. 248-250; Somerville, pp. 67-68; and author's interviews with US government officials, September 1995.

the fighting was no longer a one-sided contest in which Libya's heavy weapons simply frightened away Chadian units. The armored cars and Toyota trucks also restored to the Chadians the strategic mobility and the tactical maneuverability they had lost when they had adopted modern infantry tactics. The FANT's Gourane and Zaghawa warriors were then able to employ their traditional desert warfare tactics in a way that they had not been able to before. Although they did not rely on Western tactics or doctrine, the Chadians did need Western instructors to train them to use their new weaponry. Finally, the Chadians lacked the technical skills and the know-how to maintain or supply this new arsenal in the field, thus it was critical to their wide-ranging offensive operations that the Western powers take a major hand in their logistics and maintenance systems.<sup>34</sup>

The second critical element in the change in the military balance in 1986 was the disintegration of the Libya-GUNT alliance. Without the GUNT, Libyan formations were stripped of their infantry and reconnaissance elements. Libyan infantry and reconnaissance elements were brought in as replacements, but they were not nearly as effective as the Chadians had been. Libyan formations were forced to scout for themselves--which they rarely did--and, in combat, they could no longer simply stand back and provide fire support while the GUNT soldiers did the real fighting. Now the Libyans had to engage the Chadians themselves and the Chadians, employing their traditional "swarming" tactics, proved to be much better in combat than the slow, inflexible Libyans.<sup>35</sup>

Thus to a great extent, the changes of 1986 simply stripped the Libyans of several artificial advantages they had enjoyed in the early 1980s. With their GUNT infantry gone and the Chadians capable of taking on their tanks and aircraft, the Libyans could not win by simply providing massive fire support and the occasional armored charge. With their advantage in technology/firepower and their Chadian allies both gone, the Libyans had to actually fight it out with the FANT and, on every occasion, the Chadians proved to be far superior.

### *Chadian Strategic Leadership*

Chad's senior military commanders performed extremely well throughout the fighting. In every aspect of generalship they deserved high marks. Much credit must go to Habré himself, who conceived and planned most of the Chadian operations. Nevertheless, his senior field commanders such as Hassan Djamous, Muhammad Nouri, and Ahmed Gorou also performed superbly. Indeed, several Western journalists compared Hassan Djamous to Erwin Rommel for his deft leadership.<sup>36</sup> The Chadian high command stressed reconnaissance and patrolling, and Chadian moves were made with an excellent understanding of the situation. Every Chadian operation was painstakingly prepared by Habré and his lieutenants so that there was as little confusion as possible. Despite moving sizable forces over hundreds of kilometers of open desert, the Chadians rarely had logistical problems and their victories were smooth and quick despite high degrees of complexity and improvisation in their actual conduct.<sup>37</sup>

Chad's overall operational concept, as well as each of its strategic moves, were excellent. Habré and his lieutenants seized on the opportunity presented by the GUNT falling out with Libya to launch their offensive. They reinforced Goukouni to hold the Libyans while striking their main blow against the Libyan garrisons in central Chad.

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<sup>34</sup> Brooke, "Modern Arms a Key Factor . . .," p. A8; author's interviews with Lt. General Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>35</sup> Author's interviews with Lt. General Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>36</sup> Brooke, "Modern Arms a Key Factor . . .," p. A8; James, p. 21.

<sup>37</sup> Trainor, "Desert Tactics of Chadians . . .," p. A4; and author's interviews with US government officials, September 1995.

They recognized that Ouadi Doum was too strong to be assaulted so they lured part of the garrison away and destroyed it, making the stronghold a much easier target. They took Fada and Ouadi Doum and, as a result, Faya Largeau fell into their hands without a fight. They astutely recognized when the Libyans were broken and pursued aggressively, often capturing additional prizes as a result. At other times, when the Libyans were able to retreat in some semblance of order or could fall back on good defensive positions, the Chadians were careful to regroup and carefully prepare their forces before attacking the next objective. Finally, the deep raid against Maatan as-Sarrah to eliminate Libyan air support before launching a new assault on Aouzou was brilliant.

Particularly praiseworthy was the fact that Habré and his subordinates recognized both the strengths and the weaknesses of their forces and carefully tailored their war effort to these capabilities. Chad's war leaders knew that their forces would do best if they could employ their traditional desert warfare techniques and so they bought weapons and other equipment specifically to allow them to implement such tactics. They purposely turned down offers of heavier weapons such as tanks and artillery because they recognized that 1) their troops would not be able to operate and maintain these systems, 2) these weapons would be big and clumsy and so would slow their operations and make it difficult to camouflage their advances, and 3) they would require an extensive logistics train that would tie their units to the roads and thereby limit their mobility.<sup>38</sup> In this respect, the Chadian generals were very much like Generals Isma'il of Egypt and Husayn Rashid of Iraq. However, the difference between them is that the Chadian generals had far more capable forces under their command than did the Arab generals, and the Chadians fought far less competent foes.

### *Chadian Tactical Leadership*

The performance of Chad's tactical commanders was also outstanding. Because it was part of their traditional military method to do so, and because they lacked the radios to do it any other way, the Chadians relied on a highly decentralized command structure in battle. Before a fight, Chadian officers would gather with their overall commander to share information about the enemy, hear his plans for the battle, and learn how their units could be best employed in that plan. However, once combat was joined, actual operations were left entirely to the discretion of company, platoon, squad, and vehicle commanders.<sup>39</sup> How best to achieve tactical surprise, how to maneuver, and how to coordinate the operations of different units were all left up to the individual commanders. Consequently, the Chadian approach placed a tremendous tactical burden on Chad's "junior officers."<sup>40</sup> Had they failed, the Chadian armies would have failed too, and thus Chad's successes were very much their successes.

Chadian battle tactics, derived from their traditional desert warfare methods, also relied on the skills of their small unit commanders, and here as well the Chadians performed superbly.<sup>41</sup> The Chadians employed "swarming" tactics against the Libyans. This style of warfare demanded that Chadian commanders at the lowest levels be quick-thinking, highly aggressive, creative, and able to act with little or no guidance from higher authority--and the Chadians more than filled these requirements. They used the

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<sup>38</sup> Author's interviews with US government officials, September 1995.

<sup>39</sup> Tartter (Chad), p. 182; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>40</sup> Chad had no real rank structure. There were only fighters and commanders ("camarades"). Nevertheless, there was a rough hierarchy, essentially based on the size of the units commanded by different personnel. I generally have considered commanders of company formations and smaller to be tactical commanders.

<sup>41</sup> On the derivation of Chadian tactics in 1986-1987 from traditional Chadian desert warfare tactics, Tartter (Chad), p. 182; Trainor, "In the Desert Chad Exhibits . . .," p. A12; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

speed of their armored cars and Toyotas to dart around the battlefield, hitting Libyan armored vehicles in the flanks, and often from several angles simultaneously. The Chadians maintained a very high pace of operations, relying on the speed and flexibility of their units to confuse the Libyans, isolate them in smaller units and then crush them suddenly with tremendous firepower from all sides.<sup>42</sup> Whenever the Chadians ran into a problem it was up to the individual commander on the spot to find a solution to it with whatever was at his disposal. The Chadians maneuvered constantly on the battlefield to prevent the Libyans from bringing their heavier firepower to bear, and to get flank shots on Libyan armor and fortified positions. Indeed, no matter how much the Libyans tried to orient their forces in an all-around defense, the Chadians were forever on their flanks and in their rear. When the Chadians faced Libyan strongholds fortified in all directions--such as at Ouadi Doum--the Chadians probed for weak spots then quickly committed overwhelming force there, penetrated the Libyan lines, and spread out to hit nearby units in the flank and attack artillery positions and command posts.<sup>43</sup>

Chadian tactical commanders also showed a knack for the intelligence aspects of war. Chadian officers conducted constant patrols and other reconnaissance operations. They scoured the immediate vicinity of their forces as well as dispatching long range patrols to try to discover the status and movements of Libyan forces. Of course, the Chadians were greatly aided by the intelligence support they received from the Western powers.<sup>44</sup> The Chadians also placed a huge emphasis on camouflage, concealment and deception (CC&D). Chadian troops dispersed across miles of desert whenever they stopped. Unit commanders and vehicle crews were responsible for getting their men and machines out of sight so that there would be nothing for Libyan aerial reconnaissance to see. When moving, the Chadians used surreptitious or unlikely routes of march to prevent the Libyans from learning of their approach. As a result of these efforts, the Chadians almost always surprised the Libyans, but were rarely surprised by them.<sup>45</sup>

It is difficult to assess the combined arms integration of Chadian forces if only because they had no air force, no armor, no artillery, few true combat engineers, or other combat arms/combat support units. Chadian formations consisted either of armored cars and the Toyotas with their crew-served weapons, or else of light, mobile infantry. Based on limited information, the Chadians appear to have done well in employing at least these two types of units in tandem. In particular, the Chadians recognized that each type of unit had its strengths and weaknesses and they generally were good at using each to cover the weaknesses of the other. Thus on those occasions when Chadian armored cars and

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<sup>42</sup> US government officials familiar with the war in Chad remarked that Chadian troops "had no sense of time." Very few Chadian officers possessed watches, but this seemed to be a symptom of the problem rather than the cause. In general, Chadian troops and even their commanders paid little attention to precise timing. Chadian commanders in some instances tried to launch their attacks at a specific time--such as at dawn or during the hottest part of the afternoon--but otherwise made no effort to synchronize the actions of different units. This pattern fits claim of the underdevelopment theory that pre-industrial societies pay less attention to time than do industrial societies, and especially see little importance in precise timing. However, the evidence from the Chadian case contradicts the underdevelopment theory in that this lack of attention to time does not seem to have hurt the Chadians. Of course it may have been that the Chadians were simply lucky to have fought the Libyans who were indolent and slow to act, making it unnecessary for the Chadians to treat time and timing as important considerations.

<sup>43</sup> Brooke, "Chadians Describe Victory in Desert," p. A5; Anthony H. Cordesman, *After the Storm: The Changing Military Balance in the Middle East*, (Boulder, CO: Westview, 1993), p. 133; Tartter (Chad), pp. 182-186; Trainor, "Desert Tactics of Chadians . . .," p. A4; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>44</sup> Legum, *ACR, 1986-1987*, p. B189; Trainor, "Desert Tactics of Chadians . . .," p. A4.

<sup>45</sup> Brooke, "Modern Arms a Key factor . . .," p. A8; Lewis, p. A1; Trainor, "Chad's Anti-Libya Offensive . . .," p. A3; Trainor, "Desert Tactics of Chadians . . .," p. A4; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

trucks ran into Libyan or GUNT infantry with rocket-propelled grenades (RPGs) and other light anti-tank weapons, the Chadians would bring up their infantry to clear away the enemy anti-tank teams before the light armor resumed its advance.<sup>46</sup>

### *Chadian Technical Skills*

Chadian military personnel had almost no technical skills or exposure to machinery and so their ability to handle modern military equipment was also very low. Nevertheless, they never let this be an obstacle preventing them from achieving their objectives. Instead, they procured the weapons they could handle and that fit their preferred tactics. They turned over those functions such as logistics and maintenance that they knew they could not perform to their Western advisers and developed their operations with this constraint in mind. The Chadians also were helped in this area by the fact that their opponents were equally bad off.

Interestingly, Chadian troops generally picked up how to employ new weaponry quite quickly. The FANT learned to handle the Milan, the Mk-19 grenade launcher, and even the V-150 armored car after only a very short time. It must be noted, however, that these are not terribly difficult weapons to employ--except for the V-150. The Redeye is a much more complicated and cumbersome system and the Chadians had far greater difficulty with it. Moreover, the Chadian leadership shied away from more sophisticated systems than these, in part because they believed their men would not be able to master them. Chadian marksmanship also was very poor. This does not seem to be a product of inept weapons handling though, but instead seems primarily to be the result of the limited amount of training the Chadians were able to do before going into battle and the fact that the Chadians liked to stay in motion and did not always stop to take aim before firing their weapons.<sup>47</sup>

Chadian maintenance generally was terrible. At some level, Chadian personnel understood that their vehicles and weapons had to be carefully cleaned and repaired. However, it rarely occurred to Chadian personnel to perform maintenance and when it did, few understood how to perform the necessary operations properly. Thus for instance, the Chadians tried hard to properly maintain their armored cars and Toyota trucks because these were so important to their mobility, but they had only very modest success and frequently had large numbers of deadlined vehicles. Similarly, the Chadians realized early on that they just did not have the trained manpower to handle the logistics required for moving sizable motorized forces over long distances in the open desert. Few Chadians could read or write, let alone calculate the supply requirements of hundreds of vehicles with several thousand troops and their weaponry. Thus logistics too was left to the French.<sup>48</sup>

As this discussion indicates, the most important role of Chad's Western advisers was the technical support they provided. The Chadians were very confident of their abilities in battle, but they needed the Westerners to get them there. Their Western advisers had to handle maintenance and logistics so that the Chadians would be able to get the forces they needed where they needed them in good fighting shape. The French and Americans had to provide the weapons the Chadians needed to defeat the Libyans, as well as training in how to handle those weapons. The Western powers also were very useful in a few other areas such as intelligence and airpower. However, that is where it ended. The Chadians did not want or receive Western tactical training or strategic advice,

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<sup>46</sup> Author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>47</sup> Tartter (Chad), p. 184; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>48</sup> Legum, *ACR, 1986-1987*, p. B190; Trainor, "France and US Aiding Chadians . . .," p. A5; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

nor did Western forces participate in ground combat. Western military personnel in Chad were not assigned to combat formations as advisers and played no part in operational decision-making.<sup>49</sup>

### *Other Aspects of Chadian Military Effectiveness*

It is very difficult to accurately assess the cohesion of Chadian units in combat. The problem is that Chadian tactics were to attack hard and quickly and then break off if the enemy was not defeated. On a few occasions, mostly in the Tibesti, Libyan units put up fierce resistance from fortified positions and hung on despite Chadian swarming tactics. The Libyans were able to hold their ground longer than the Chadians expected and the Chadian formations fell apart. Moreover, in the words of one US government official knowledgeable about the course of the war in Chad, the Chadians "just didn't do defense." Chadian units almost never tried to hold static positions against enemy attacks, instead preferring to counterattack and turn any battle into a meeting engagement. The Chadians were at their best when combat was fluid and they could maneuver freely and they avoided defending fixed lines whenever possible.<sup>50</sup>

Thus when the Chadians were on the offensive and were winning, their unit cohesion was great, but when they were losing or forced to defend fixed positions, their unit cohesion was terrible. To be objective, this pattern does not really support any conclusion regarding Chadian military effectiveness. However, in the Chadian case there is reason to believe it implies that Chadian unit cohesion was poor in general and only quick, obvious victories could keep their units together. As noted above, Chadian commanders had a superb understanding of the strengths and weaknesses of their troops. The fact that they avoided static defensive operations and pitched battles therefore may indicate that they knew their unit cohesion could not withstand a prolonged fight and so they purposely conducted operations that would not strain their unit cohesion.

Chadian morale, at least at the start of the Chadian offensive in 1987, was high, but Chadian troops do not seem to have exhibited particularly high degrees of personal bravery. FANT troops first drew confidence from their new weapons, which they realized would give them a good chance to defeat Libyan armor and airpower. Thereafter, each Chadian victory in 1986 reinforced that confidence, so that by the start of 1987, Chadian troops were very enthusiastic. Despite this ardor, Chadian troops do not appear to have been unusually brave. They were not cowardly by any means, but extraordinary acts of courage and self-sacrifice were the exception rather than the rule. To some extent, bravery was inherent in Chadian tactics: racing around the battlefield in unarmored Toyota trucks taking potshots at Libyan tanks and APCs requires a great deal of intestinal fortitude. On the other hand, seeming bravery was often revealed to be Chadian naiveté masquerading as courage. For instance, Chadian truck drivers attempted to drive straight through Libyan minefields, not because they expected to selflessly clear a lane at the risk of their own lives for their comrades behind them, but because the uneducated Chadian troops believed that if they drove fast enough, the mines would detonate behind them.<sup>51</sup>

### *Why Chad Won*

The Chadian FANT proved to be a very skillful military force. Chadian generalship was superb and ensured that N'djamena's forces fought under the most advantageous circumstances possible. Habré and his generals put together a brilliant

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<sup>49</sup> *The Economist*, "Chad: The Battle of Ouadi Doum," March 28, 1987, Vol. 302, No. 7491, p. 38; James, p. 22; Lorell, pp. 52-58; Somerville, p. 75; and author's interviews with US government officials, September 1995.

<sup>50</sup> Author's interviews with US government officials, September 1995.

<sup>51</sup> Trainor, "Chad's Anti-Libya Offensive . . .," p. A3; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.



campaign employing a series of operations that pitted the significant strengths of their own forces against the equally significant weaknesses of the Libyans. Conducting a successful offensive to evict the Libyans from their positions in northern Chad was an inherently difficult prospect because of the terrain, the paltry infrastructure, the distances, and a host of other factors. Not every general could have solved these problems. Chadian tactical abilities were crucial because they allowed the FANT to prevail over the Libyans in every battle, but without the ability of their generals to link those battles into a coherent campaign the Chadians would not have been able to achieve half of what they actually did.

Of equal importance to Habré's victory was the prowess of the forces under his command. There is no question the Chadians would have failed overall had they not been able to consistently prevail in tactical engagements. The ability of Chadian tactical formations to conduct swift maneuvers, to coordinate their actions with little guidance from higher authority, to react flexibly to the vicissitudes of combat, to seize opportunities as they presented themselves, and to do everything else that was required to prevail in fluid maneuver warfare was invaluable. Moreover, what is most impressive about Chadian tactical strength, is that their prowess on the battlefield was achieved almost entirely through the tactical skills of Chadian soldiers and junior officers: their weaponry contributed very little to their victory.

This is not to suggest that the new weapons Chad received from France and the US in 1986 were unimportant. Clearly they were not. Without the Milan, the Redeye, and the other heavy infantry weapons, Chad could not have defeated Libya because without them the FANT had no answer to Libyan tanks and aircraft. But with them, it was not the weapons *per se* that allowed the Chadians to beat the Libyans. All the new weapons did was to "level the playing field" between the two sides. Once the Chadians had a counter to Libyan armor and airpower they were able to employ their superior tactical abilities to beat the Libyans. It was Chadian tactical leadership, not Chadian weaponry or the ability of their soldiers to handle those weapons, that brought them victory in combat with the Libyans.

Indeed, Chadian technical skills were atrocious and the FANT had to win in spite of this weakness. Chadian troops were so limited in their ability to handle and support modern war machinery that Habré and his generals had to find the simplest systems that would still allow them to get the job done. Against Libya, getting the job done meant being able to destroy Libyan tanks and jets. The Chadians were able to do this with their new weapons, but never elegantly. The Chadians probably shot down no more than four Libyan aircraft with Redeyes and fired off scores of Milans for each Libyan armored vehicle they destroyed.<sup>52</sup> Moreover, taking a broader view, the Chadian arsenal by itself, would not strike fear into most generals: the Chadians were really a force of only about 10,000 men with Toyota trucks as their primary transportation and armed with nothing heavier than ATGMs and other infantry weapons. Thus Chadian victory had very little to do with the size or sophistication of their arsenal, or with their ability to employ these weapons to the maximum extent of their capabilities, and everything to do with what those weapons allowed the Chadians to do in battle.

Another factor of great importance to Chad's victory was the incompetence of their adversary. The Libyan military was an extremely poor force. It suffered from all of the problems common to Arab militaries to an extreme degree. Libyan tactical forces were inflexible and unable to react to unforeseen events, they would not maneuver in battle, they could not effectively conduct combined arms operations, they were unaggressive and showed almost no flare for improvisation, and they could not or would not exploit unexpected opportunities. They did reasonably well in static defensive operations until surprised or outmaneuvered by the Chadians, but were only capable of

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<sup>52</sup> Author's interviews with US government officials, September 1995.

very small, set-piece assaults. Libyan fire was terribly inaccurate, as were its airstrikes. Libyan armored units employed their tanks either as moveable pill-boxes that were rarely moved, or else as simple battering rams. Libyan artillery could deliver tremendous volumes of fire against pre-registered targets, but could not shift or redirect its fire in response to changing battlefield conditions. Libyan forces suffered from severe problems with dissembling and obfuscation.<sup>53</sup> Finally, the Libyan military suffered from an acute case of commissariat politicization which left the battalion as the largest organic maneuver unit in the army, resulted in a highly centralized chain of command, and fostered a stifling compartmentalization of information throughout the command structure.<sup>54</sup>

By mid-1987, the Libyans faced additional problems. First, the break with the GUNT stripped Libyan senior commanders of their only decent source of information on the enemy. Libyan tactical commanders rarely if ever sent out patrols, regardless of their situation or mission. Indeed, one of the major factors contributing to the massacre at Bir Kora was that the Libyan commanders of *both columns* failed to conduct any reconnaissance in front of their advance and so had no idea they were walking into a Chadian trap.<sup>55</sup> Second, the parade of Libyan defeats continuously eroded Libyan morale, so that by the time of the Chadian assault against Ouadi Doum the Libyans were halfway to defeat before the battle ever began.<sup>56</sup>

As noted above, Libyan technical skills were also very low. Ultimately, the Libyans possessed an arsenal that should have allowed them to win. The Libyans were decked out in all of the trappings of a modern army. They had tanks, APCs, armored cars, self-propelled artillery, MRLs, every conceivable type of infantry weapon, abundant motor transport, fighters, bombers, reconnaissance aircraft, and helicopters. This force should have been more than adequate to obliterate a Chadian force equipped with a few armored cars, Toyota trucks, and infantry weapons--especially since the Libyans were frequently on the defensive and outnumbered the Chadian attackers. Of course, much of the Libyan arsenal consisted of older Soviet equipment, which had inherent problems. For example, just as the Cubans found in Angola, older Soviet weapons were often too cumbersome to deal effectively with light, nimble opponents. However, the consensus among Western military analysts and observers of the war in Chad, was that Libya's primary problems were the limitations of its soldiers and officers, rather than those of their equipment.<sup>57</sup>

Ultimately, Chad's stunning defeat of Libya was the product of the combination of Chadian strengths and Libyan weaknesses. The Chadians forced the Libyans to fight a war of rapid maneuver which came "naturally" to the Chadians and did not come at all to the Libyans. Thus the Chadians were able to do to the Libyans what the Israelis were able to do to their Arab opponents in virtually all of the Arab-Israeli wars, and what the United States was able to do to the Iraqis during the Persian Gulf War.

That it was Chadian tactical abilities rather than any superiority in weaponry that

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<sup>53</sup> Brooke, , "Modern Arms a Key . . .," p. A8; Brooke, "Chadians Describe Victory . . .," p. A5; Cordesman, p. 133; Legum, *ACR, 1986-1987*, pp. B188-190; Lorell, p. 59; Trainor, "Chad's Anti-Libya Offensive . . .," p. A3; Trainor, "France and US Aiding Chadians . . .," p. A5; Trainor, "In the Desert . . .," pp. A1, A12; author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

<sup>54</sup> Author's interviews with US government officials, September 1995.

<sup>55</sup> Brooke, "Modern Arms a Key Factor . . .," p. A8; and author's interviews with US government officials, September 1995.

<sup>56</sup> Henderson, p. 25; James, p. 21; Scott Kraft, "Suddenly Nation is United: Chad's Civil War Turns into a Battle With Libya," *The Los Angeles Times*, March 9, 1987, p. A1; Trainor, "Chad's Anti-Libya Offensive . . .," p. A3.

<sup>57</sup> Author's interviews with Lt. Gen. Bernard Trainor, May 1994; and author's interviews with US government officials, September 1995.

was most important in their victory over Libya is further demonstrated by comparing the Chadian experience against Libya with the Cuban experience against South Africa in 1987-1988. The Libyans and the Cubans were armed almost identically: they both used large numbers of older Soviet-style tanks, APCs, artillery, aircraft, etc. Both sides also relied heavily on Soviet military practices. Moreover, they both fought foes with similar styles of warfare and accoutrement. The Chadians and the South Africans both favored light, quick formations centered on armored cars and "swarming" tactics in battle to defeat the enemy's heavy units with speed and maneuver. Given these parallels, it is noteworthy that while the Cubans essentially fought the South Africans to a draw, the Libyans were crushed by the Chadians. In fact, the South Africans actually were far better armed than the Chadians because they had improved Centurion tanks, better armored cars, modern jet fighters, and the incomparable G-5 artillery pieces. Thus the Cubans actually had a tougher task than the Libyans. The fact that the Cubans and South Africans fought to a draw while the Libyans were crushed by the Chadians demonstrates that the caliber of the weaponry on either side, and even the ability of one side or another to take full advantage of the capabilities of that weaponry, was not nearly as important in determining the outcome of combat as were the tactical skills of the two sides. The Cubans stalemated the highly efficient South African Defense Force because they too were very effective, whereas the Libyans lost to the FANT because the Chadians were so much more competent.

### **Chadian Military Effectiveness and Arab Military Effectiveness**

Despite the fact that neither the Arab states nor Chad were industrialized societies, there were few similarities between the performance of the Arab armed forces between 1945 and 1991 and the performance of the Chadian FANT in 1986-1987. The Chadians were poorer and more backward than the Arabs were at any time during the postwar period, yet Chadian forces actually fought better than Arab armies. To a great extent, the Chadians were the exact reverse of the Arabs. Whereas Arab forces demonstrated their greatest strengths in unit cohesion, personal bravery, set-piece offensives, and static defenses, these were the aspects of military operations in which the Chadians were weakest. Likewise, the Chadians' greatest strengths were the flexibility, initiative, creativity, and independence of their tactical commanders and the quickness and maneuverability this brought to their units in battle. The absence of these same traits was the greatest weakness of the Arab armies during the postwar era. The one area of overlap between them was in their limited technical skills and their difficulties employing and supporting modern military equipment.

### **Chinese Military Effectiveness, 1950-1979**

A comparison of Arab military performance 1945-1991 with the Chinese military experience in 1950-1979 affirms the conclusions of the Chad case that vast differences in military effectiveness existed between many Arab and non-Arab forces despite comparable levels of socio-economic development. China's extreme backwardness does not appear to have produced the same patterns of ineffectiveness in Chinese forces fighting against the American-led United Nations forces during the Korean War, against India in 1962, and against Vietnam in 1979 that characterized Arab operations during the postwar era.

Although perhaps not quite so poor as Chad, China was an extremely underdeveloped state from 1950, when it entered the Korean War against the US and its allies, to 1979 when it invaded Vietnam. Compared to the Arab states in 1960, China in

1950 was considerably more backward.<sup>58</sup> (See tables 16b and 16c below for a comparison of Chinese socio-economic indicators for 1950 and 1980 with those of the Arab states in both 1960 and 1990). All of the Arab states had higher per capita GNPs, their production of electricity per capita was seven to sixteen times greater than that of China's in 1950, and only Saudi Arabia had a lower literacy rate. In terms of exposure to machinery, there was only one car for every 10,940 people in China in 1950, whereas in the Arab states the number of people per car ranged from 168 to 386 in 1960. Although by 1979 China had made some progress, it was still a very underdeveloped nation compared to the rest of the world. In some areas such as literacy and life expectancy, China in 1980 was comparable to the poorer states of the Arab world in 1990. However, in terms of industrialization, China was still far behind. For example, whereas per capita electricity production for the five Arab states ranged from 430 to 3,300 kilowatts per hour, China produced only 274.<sup>59</sup>

China's size suggests that it might have been able to recruit only a small percentage of the healthiest and best educated men in its population and field a still large but unrepresentative army, but it never did so. Since the beginnings of the Chinese Civil War, the Chinese communists always opted for a mass conscription army. As a result, Chinese military personnel closely reflected Chinese society in general. Thus in 1950, the Chinese army was almost entirely illiterate, uneducated, and unfamiliar with machinery and modern industrial life.<sup>60</sup> Indeed, Russell Spurr notes that during the Korean war the small number of radios in the Chinese army had to be operated by former Nationalist soldiers who had been trained as signalers by the US during World War II, "because their own revolutionary farm lads could hardly flush a toilet, let alone replace a radio tube."<sup>61</sup> In less colorful language, the US Defense Intelligence Agency commented that, "The Chinese Communist Army of 1949 was basically a peasant-infantry force organized and trained mainly for guerrilla-type operations in which conventional military science and technology played a lesser role. Its firepower, mobility, communications, and logistics were limited and for the most part archaic."<sup>62</sup>

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<sup>58</sup> There is no particular reason why Chinese socio-economic development in 1950 must be compared to Arab socio-economic development at the same time. First, as noted previously, this information is simply unavailable for the Arab states in 1950. Second, and of greater importance, all that matters for purposes of my study are comparable levels of development--not exactly when each country achieved those levels. The underdevelopment theory claims that more industrialized societies should field more competent armies while less industrialized societies should field less competent armies. Thus all that matters to the theory is a nation's level of industrialization--timing is irrelevant. If one society in 1980 is more backward than another was in 1950, the theory still predicts that the army of the more advanced 1950 society should be more competent than the army of the less advanced 1980 society. Consequently, comparing Chinese society in 1950 to Arab society in 1960, or at any other time, is a perfectly valid test of the underdevelopment theory.

<sup>59</sup> Central Intelligence Agency, *China: Economic Indicators, 1977*, (Washington, DC: CIA, 1978); Central Intelligence Agency, *China: Economic Performance in 1987 and Outlook for 1988*, (Washington, DC: CIA, 1988); Economic Research Centre, The State Council of the People's Republic of China and the State Statistical Bureau, *Almanac of China's Economy*, (Beijing: 1981); The World Bank, *World Development Report, 1990*, (NY: Oxford University Press, 1992).

<sup>60</sup> Lt. Col. Roy E. Appleman, *Disaster in Korea: The Chinese Confront MacArthur*, (College Station, Tex: Texas A & M University Press, 1989), p. 17; Defense Intelligence Agency (DIA), *The Chinese Armed Forces Today*, (Englewood Cliffs, NJ: Prentice Hall, Inc, 1979), p. 120; Samuel B. Griffith II, *The Chinese People's Liberation Army*, (NY: McGraw Hill, 1967), p. 130; S. L. A. Marshall, *The River and the Gauntlet*, (NY: William Morrow and Co., 1953), p. 1.

<sup>61</sup> Russell Spurr, *Enter the Dragon: China's Undeclared War Against the US in Korea in 1950-1951*, (NY: New Market Press, 1988), p. 19.

<sup>62</sup> DIA, p. 13.

## Chinese Military Operations, An Overview

After the Communist victory in 1949, the Chinese armed forces went to war three times. In 1950, China intervened in the Korean War against the US-led United Nations army when UN forces drew uncomfortably close to China's borders. In 1962, China went to war with India essentially over the demarcation of their common Himalayan border, but also wrapped up in this issue was China's control over Tibet. Finally, in 1979, China invaded Vietnam to try to convince Hanoi to call off its earlier invasion of Cambodia. In each of these wars, China committed in excess of 100,000 men to the fighting. Chinese troops also engaged in several clashes with Soviet forces along the Amur and Ussuri rivers in the late 1960s and early 1970s, but too little is known about these battles in the West to include them in a discussion of Chinese military effectiveness.

### *Korea, 1950-1953*

When China intervened in the Korean war in October 1950, all of the material factors favored the UN armies. The Chinese were led by Marshal Peng Dehuai, who attacked into Korea with two army groups, the 13th and the 9th. These army groups commanded nine armies between them, which in turn comprised 31 divisions. The 13th Army Group faced the main UN force, the US Eighth Army marching up the western side of the Korean peninsula, while the 9th Army Group faced the US X Corps on the eastern side. The 13th Army Group was the stronger of the two, with six armies boasting a total of about 180,000 men. In addition, the armies assigned to the 13th Army Group were all veteran formations from the Chinese civil war, indeed, one of them--the 50th--was manned entirely with former Kuomintang military personnel.<sup>63</sup> The 9th Army Group had only 120,000 men in three armies, and a greater proportion of new recruits than the 13th Army Group. Altogether the Chinese, committed roughly 350,000 men to their offensive.<sup>64</sup> Against them, the UN forces consisted of 450,000 men, of which about 225,000 were Republic of Korea (ROK) troops.<sup>65</sup>

In addition to this slight numerical edge, the UN armies, and particularly their American backbone, possessed an incalculable advantage in equipment, mobility, and firepower. Chinese units were laughably underequipped compared to their American counterparts. The Chinese armies attacked without any artillery--they had a few *Katyusha* MRL batteries but held these in reserve at first. The Chinese had no antitank weapons, and instead, every Chinese platoon carried enough TNT for 8-10 five pound satchel charges which had to be placed in the wheels of a tank or thrown through an open hatch to have any effect. The heaviest weapons Chinese units possessed were a few 120 mm mortars per regiment and only light mortars and light machine guns at lower echelons. The Chinese had no radios below regimental headquarters, and had so few of these that divisions generally relied on runners for most of their communications. Only one-quarter to one-third of the Chinese infantrymen even had rifles: the vast majority of the Chinese army went into battle with nothing more than grenades. Those weapons the Chinese did have were a heterogeneous assortment captured from the Japanese and the Kuomintang and so consisted of older US, European, Japanese and a few Russian small arms. Finally, the Chinese entered Korea with a logistics system that had to rely entirely on porters except for about 800 old trucks, of which only 3-400 were operational on any

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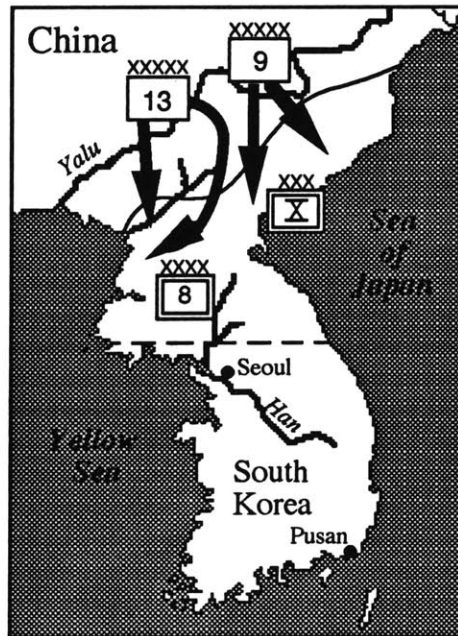
<sup>63</sup> Appleman provides the following breakdown in experience levels for Chinese military personnel in November 1950: 15 percent were Communist veterans of World War II or before, 25 percent were Communist veterans of the Chinese Civil War, 30 percent were former Nationalist soldiers, and 30 percent were young men inducted since 1948. Appleman, p. 352.

<sup>64</sup> Appleman, pp. 12, 19, 44-45; Clay Blair, *The Forgotten War: America in Korea, 1950-1953*, (NY: Times Books, 1987), p. 391; Edwin P. Hoyt, *The Day the Chinese Attacked: Korea 1950*, Paperback edition, (NY: Paragon House, 1993), pp. 93, 119, 146, 169; Spurr, pp. 79-80, 118, 167-168, 268

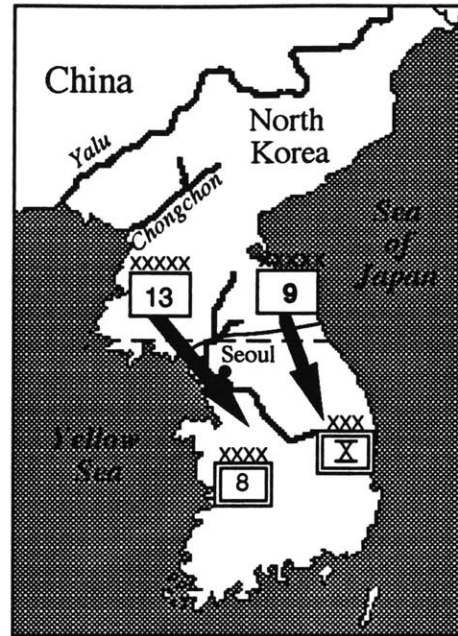
<sup>65</sup> Allen S. Whiting, *China Crosses the Yalu*, (NY: MacMillan, 1960), p. 122.

## Chinese Offensives, 1950-1951

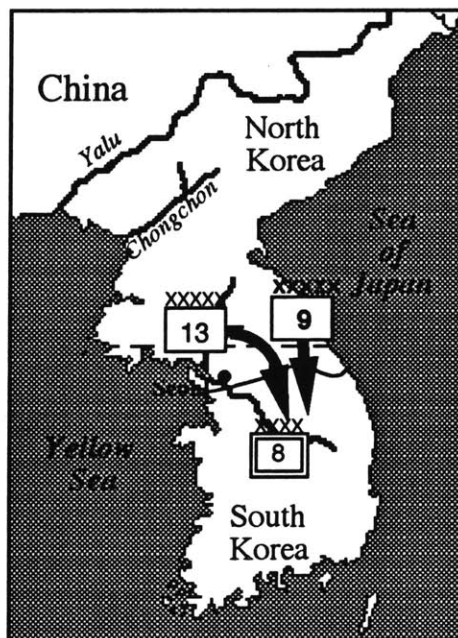
Second Phase Offensive, Nov-Dec 1950



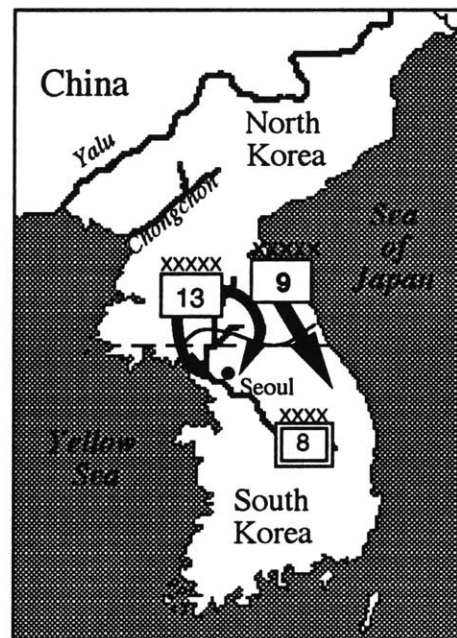
Third Phase Offensive, Jan 1951







Fourth Phase Offensive, Feb 1951



Fifth Phase Offensive, April-May 1951



-  - Chinese Attacks
-  - UN frontline at the start of a Chinese attack

-  - Chinese forces
-  - UN forces

given day.<sup>66</sup> As a basis for comparison, the US Eighth Army with four US divisions and four ROK divisions alone fielded nearly 800 artillery pieces.<sup>67</sup>

The initial Chinese assault began on 21 October 1950. They struck with total surprise. Chinese CC&D efforts were phenomenal, and US intelligence never detected the movement of their vast armies into Korea. The Chinese moved only at night, carefully hid themselves and their equipment during the day, and even covered their tracks in the snow as they moved. The Chinese also were greatly aided by the self-deception of UN-commander General Douglas MacArthur's headquarters. MacArthur adamantly believed that the Chinese would not intervene, (and if they did that they would be easily defeated by US airpower), and so he and his subordinates constantly disregarded evidence of an impending Chinese attack. Indeed, even after the attack, MacArthur's HQs refused to acknowledge that it was being carried out by the Chinese.<sup>68</sup>

When the Chinese attacked, UN forces were caught spread out all over northern Korea and completely unsuspecting. The Chinese hit so quickly and so hard that many units were overrun before they knew what was happening. They enveloped the ROK 1st Infantry Division, attacking simultaneously from the rear and both flanks before the division ever knew they were there. The South Koreans were able to fight their way out only because they were able to call on enormous US firepower to cover their retreat. The Chinese then smashed the ROK 6th and 8th Infantry Divisions, caving in the right flank of the ROK II Corps and causing the entire corps to collapse. The Chinese armies kept pushing west, trying to roll up the lines of the US Eighth Army. They were able to envelop and maul the US 8th Cavalry Regiment at Unsan, before the Eighth Army commander, Lt. General Walton Walker, ordered the entire army to fall back to the Chongchon river. At the Chongchon, the US was able to regroup and bring to bear its tremendous firepower to halt the Chinese advance.<sup>69</sup>

Marshal Peng concluded that it would be too costly to try to break through the UN lines along the Chongchon and instead opted to pull back in hopes of luring the UN armies back north. Peng's intention was to coax the UN forces out of their fortified lines and get them on the move where they would be easier prey for another Chinese offensive.<sup>70</sup> In addition, the Chinese started to suffer from logistics problems almost immediately. Within days of the initial attacks, Chinese combat units had outstripped the pace of their man-powered logistics columns. Chinese units carried only three days of food and after a week of combat were tired and starving. This too argued in favor of a withdrawal and preparation for a new offensive.<sup>71</sup>

The Chinese Second Phase Offensive, their main assault against the UN, began in late November 1950. By that time, Marshal Peng had regrouped and resupplied his forces and believed he had his support services in better shape for a new offensive. On the other hand, the Americans had interpreted the Chinese withdrawal in early November as an indication that they had been beaten--despite the fact that they had won nearly every battle they fought--and had run back to Manchuria. Consequently, on 24 November, MacArthur ordered a renewed offensive to the Yalu river, despite the advice of some of his more clear-headed field commanders. Once again, UN forces pushed back up the

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<sup>66</sup> Appleman, pp. 17-18, 44-45; Griffith, p. 131; Hoyt, p. 100; Spurr, pp. 118-119, 170; Whiting, p. 124.

<sup>67</sup> Appleman, pp. 37-43.

<sup>68</sup> Griffith, pp. 127, 142, 147; Hoyt, pp. 127-134; General Matthew B. Ridgway, *The Korean War*, (NY: Doubleday, 1967), pp. 45-52; Spurr, pp. 158-159.

<sup>69</sup> Appleman, pp. 20-21; Griffith, pp. 127-128, 132-133; Hoyt, pp. 88-98; General Paik Sun Yup, *From Pusan to Panmunjom*, pp. 85-97; (McLean, Va: Brassey's, 1992), pp. Ridgway, pp. 54-56; Spurr, p. 136, 139-151;

<sup>70</sup> Hoyt, pp. 108-112; Peng Dehuai, *Memoirs of a Chinese Marshal: The Autobiographical Notes of Peng Dehuai (1898-1974)*, Translated by Zheng Longpu, (Beijing: Foreign Languages Press, 1984), pp. 475-476;

<sup>71</sup> Griffith, p. 138; Spurr, pp. 118-119.



peninsula spread out and with inadequate forward reconnaissance. The Chinese struck on 25 November with the force and speed of a hurricane. Once again, the Chinese attacked with complete surprise, and their operations were devastating.<sup>72</sup>

Chinese tactics were highly effective, securing victory after victory despite the lop-sided imbalance in weapons and equipment. Chinese units employed a constant screen of reconnaissance patrols to locate enemy positions. Chinese patrols would then probe the enemy lines looking for unit boundaries, flanks, gaps, and other weak points. Under cover of darkness, infantry units would infiltrate through these gaps or around the enemy's flanks. These forces would be employed in the attack to surround front-line combat units; overrun enemy command posts, artillery and other support units; and set-up ambushes deep in the rear to cut the enemy's escape route. Other Chinese units, employing painstaking CC&D, would sneak up as close to the enemy defensive positions as possible without giving themselves away. (The purpose of this was to be able to rush the defender from a very short distance to get into close combat immediately. This was advantageous because the Chinese were superb in hand-to-hand combat and because this prevented the UN units from bringing their artillery and armor to bear on the fight.) Still at night, the Chinese would begin their attack suddenly and all at once. Ideally, Chinese infantry infiltrated earlier would combine with formations in front of the enemy to launch sudden assaults from all sides simultaneously. However, when this was impossible, Chinese units customarily would launch a frontal assault to hold the enemy as other forces conducted a double envelopment of the position.<sup>73</sup> While some units participated in the destruction of the enemy's forward combat units, others would bypass them and race into the rear to attack the entire depth of the enemy sector. As soon as one sector was secured, Chinese forces pushed on quickly into the enemy's rear or into the flanks of nearby enemy units. When enemy forces eventually were put to flight, Chinese units pursued aggressively for as long as they possibly could.<sup>74</sup> These tactics were employed at every level of the Chinese military, from army group and army right down to squad and section, and proved extremely successful throughout.<sup>75</sup>

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<sup>72</sup> Blair, pp. 429-440; Ridgway, pp. 60-61;

<sup>73</sup> Contrary to popular belief, Chinese forces rarely ever employed "human wave" assaults. Human wave assaults consist of hurling masses of lightly armed infantry against an enemy position in an effort to take that position through sheer attrition. The idea is that the waves of infantry will slowly wear down the defender, and eventually the position will fall. Although the Chinese regularly employed massed infantry tactics, they rarely employed human wave attacks. The difference is subtle but important. Especially in Korea, Chinese forces were so lightly armed that they could not generate adequate firepower for virtually any military operation. Consequently, the Chinese had to employ masses of infantry for those roles that more advanced armies would normally use firepower. Specifically, Chinese armies could not use firepower to cover the movements of a unit, or to pin an adversary while another force maneuvered against it. Instead, the Chinese had to use infantry for these tasks. Thus the Chinese would employ masses of infantry attacking in line abreast to keep constant pressure on a position--just as a Western force would use firepower--while other elements outflanked and enveloped the enemy position. Obviously, this resulted in tremendous casualties because to keep the pressure on a UN position, the Chinese usually had to send large numbers of lightly armed infantry into the heavy firepower of US and allied units. Nevertheless, the point is that this was a far more skillful and sophisticated use of infantry than a human wave attack. Indeed, the Chinese only employed human wave attacks on occasion late in the Korean War, when so many of their veteran soldiers had been killed that they had to rely largely on raw recruits who lacked the training and experience to conduct more sophisticated tactics. For concurring assessments that the Chinese rarely conducted human wave attacks and actually employed highly sophisticated infantry tactics, see Appleman, p. 353; Marshall, *Infantry Operations*, p. 5; Segal, pp. 101, 147.

<sup>74</sup> Appleman, pp. 17, 79, 80-84, 98, 159, 162, 168-169; Blair, pp. 375-975, esp. p. 382; DIA, pp. 29, 37; Griffith, pp. 131, 142-144, 169; Hoyt, pp. 94, 103-104, 146; Marshall, *The River and the Gauntlet*, pp. 34, 60, 65, 73, 144, 201-204, 243, 266; Paik, pp. 85-91, 92, 100; Ridgway, pp. 52-56, 71, 82, 89, 106, 172; Spurr, p. 137-139; 155, 224, 288.

<sup>75</sup> Appleman, pp. 98, 117, 159; Hoyt, p. 110; Spurr, p. 288.



The Chinese used these tactics in November to tear massive holes in the UN lines. The weight of the Chinese attacks were directed against the center of the UN front, where the Eighth Army in the west and the X Corps in the east would have met were it not for the impassable mountains of central Korea. The Chinese 13th Army Group attacked the ROK II Corps and the US IX Corps on the right flank and center (respectively) of the Eighth Army advance while the 9th Army Group attacked the US 7th Infantry Division and the 1st US Marine Division holding the left flank of the US X Corps. Chinese successes were spectacular. In the west, the Chinese split and then destroyed the two forward divisions of the ROK II Corps, allowing two entire Chinese armies to push around the right flank of the Eighth Army and envelop the US 2nd Infantry Division as well as the right flank of the US 24th Infantry Division. The 2nd Infantry Division took 4,000 casualties and lost over 50 percent of its equipment fighting its way out of the Chinese encirclement. A Turkish Brigade rushed north to hold the collapsing right flank was butchered, and the US 1st Cavalry Division also took heavy losses when it was brought forward for the same purpose. Chinese forces penetrated and enveloped parts of the US 25th Infantry Division and the ROK 1st Infantry Division, forcing both back with heavy losses. In the east, Chinese forces outflanked and mauled the US 7th Infantry Division. The only significant reverse the Chinese suffered during the entire campaign was against the US 1st Marine Division, which conducted a brilliant fighting withdrawal. Although the Chinese threw two entire field armies against this division, the Marines fought superbly and, with plentiful fire support, they crippled the Chinese 9th Army Group and cut their way south.<sup>76</sup>

The UN forces fell back in panic and confusion and the Chinese pressed them as hard as they could. However, the Chinese advance simply ran out of steam south of Pyongyang. Several factors were at work. First, Chinese forces could not advance as quickly as the UN could retreat. Without any motor transport, the Chinese could not keep pace with the fully mechanized UN units. The Chinese lost contact with the UN on 3 December and did not catch up to them again until 20 December when the UN had regrouped and formed a new defense line north of Seoul. Second, China's hapless logistics system could not support an advance even as quick as the Chinese infantry could march. As in October, Chinese units quickly began to run out of food and ammunition. As winter crept in and they had no warm clothing, they also began to suffer severe losses from frostbite and exposure. Many units showed superhuman endurance and kept moving south without resupply, but eventually they became exhausted and had to halt. Marshal Peng had to order pauses in the advance to allow some supplies to catch up with the frontline troops. Third, US airpower prevented the Chinese from advancing during the day and complicated Chinese logistics problems by working over roads, bridges and Chinese rail lines, and destroying many of the precious few trucks the Chinese had.<sup>77</sup>

The Chinese resumed their assault on New Year's Eve. This "Third Phase Offensive" was a virtual replay of its predecessor. The Chinese again took the UN forces largely by surprise, launching 280,000 men in 21 Chinese and 4 North Korean divisions against a 100 mile assault sector. In the center of the peninsula, Chinese units again concentrated on the weak ROK II Corps, again smashing through it and then turning onto the flanks of the American units on either side. In the west, the Chinese mostly broke through the ROK divisions deployed between the American divisions, and then conducted double envelopments of the US units. Once again, in the first weeks of the offensive, the Chinese inflicted heavy losses on the UN forces and sent them reeling backward. However, almost immediately, logistical problems and China's dearth of motor transport--compounded by the relentless pressure of US airpower--prevented the

<sup>76</sup> Appleman, pp.54-203, 220-324, 397; Blair, pp. 440-521, 534-545; Griffith, pp. 141-146; Hoyt, pp. 127-166; Paik, pp. 105-109; Peng, pp. 475-476; Ridgway, pp. 64-82; Spurr, pp. 167-219, 270-277.

<sup>77</sup> Appleman, pp. 300-304, 311, 351-354, 364; Blair, pp. 545-556; Hoyt, p. 167; Ridgway, p. 73; Gerald Segal, *Defending China*, (NY: Oxford University Press, 1985), pp. 101-102; Spurr, pp. 220-251, 270.

Chinese from turning local successes into strategic victories. Time and again, Chinese units could not move fast enough to close their encirclements before the UN units slipped out of their grasp. By mid-January 1951, the Chinese had taken Seoul and pushed the UN back south of the Han river, but they ran out of steam before they could obliterate the UN armies altogether.<sup>78</sup>

The Third Phase Offensive was really China's last shot at victory in Korea and when it failed, stalemate became inevitable. By late January 1951 several important changes had deprived the Chinese of the capability for a decisive victory. First, Chinese losses were staggering. According to Marshal Peng, by the end of the Third Phase Offensive, China had lost roughly half of the force originally deployed to Korea in October and November 1950. Most of these casualties were from combat, logistics problems, and winter weather, with combat losses being the smallest of the three categories. What was of crucial significance was that so many of those killed were the hardened veterans of World War II and the Chinese Civil War. Consequently, Chinese armies increasingly were filled out with raw recruits sent to Korea to make up losses with virtually no training. Second, Chinese logistics problems continued to worsen. US airpower prevented the Chinese from effectively using the railroads inside Korea, thus supplies had to be carried by porter from the Manchurian border 300 kilometers away. Chinese divisions required remarkably few provisions compared to their American counterparts, but as soon as they went on the offensive, the extra distance from the Manchurian railheads immediately began to weigh down their advance. At the end of the Third Phase Offensive, Chinese troops were attacking UN units primarily to seize their rations rather than to take their positions or drive them out of Korea. Finally, Lt. General Matthew Ridgway took command of the US Eighth Army in Late 1950 and then succeeded General MacArthur as theater commander in 1951. Ridgway was a brilliant general who rebuilt the UN armies and devised new tactics for fighting the Chinese. With Ridgway in command, the UN forces were far more dangerous than they had been in the past.<sup>79</sup>

In early February, Ridgway launched a limited counterattack that made little progress and took heavy casualties. Less than a week later, the Chinese responded with their Fourth Phase Offensive. Through outstanding CC&D efforts the Chinese again surprised the UN units, but the declining strength of the Chinese armies and the growing strength of UN forces with Ridgway in command made this offensive even less successful than the last. Surprise and Chinese tactical prowess again combined to bring some short term successes: Chinese armies again routed several ROK divisions allowing the Chinese to penetrate and envelop nearby American units. The US 2nd Infantry Division, finally back on line after its drubbing in November, was once again encircled and mauled. This time, however, Ridgway had devised tactics that allowed the UN to employ its firepower more effectively to kill Chinese and break up their assaults. Chinese units suffered appalling losses as a result of these tactics and again their logistics failed them, forcing pauses that let UN units slip away before they could be cut off and destroyed. After only a week, the Chinese were forced to pull back to regroup.<sup>80</sup>

It took the Chinese over two months to recover from their Fourth Phase Offensive. During this time, Ridgway launched a series of limited counterattacks that succeeded in retaking Seoul. Then on 22 April, the Chinese commenced their Fifth Phase Offensive. This was Peng's last bid to win a decisive victory and for it he had assembled 70 divisions with 500,000 Chinese and North Korean troops. Yet it too followed the established pattern of achieving less than its predecessor. The Chinese again achieved

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<sup>78</sup> Blair, pp. 592-630; Griffith, pp. 151-152; Hoyt, pp. 169-187; Paik, pp. 115-121; Ridgway, pp. 93-102; Spurr, pp. 251-266, 278-300.

<sup>79</sup> Hoyt, p. 195; Paik, p. 121; Peng, p. 478; Spurr, pp. 300-305.

<sup>80</sup> Blair, pp. 633-712; Ridgway, pp. 106-119; Segal, p. 103; Spurr, pp. 124-125.

tactical surprise, and again aimed their initial assaults at ROK units. However, Ridgway had begun a program to retrain and re-equip ROK units and, this time, the ROK divisions were pushed back, but not routed. UN troops also had learned to defend their positions in-depth and from all sides so that Chinese infiltration was much harder and less effective. In addition, the UN now had roughly 650,000 troops (227,000 US, 400,000 ROK) defending a much shorter front, making it far more difficult for the Chinese to find gaps between their units. Finally, Ridgway had concentrated unprecedented levels of firepower and simply obliterated everything in front of the UN lines. American artillery batteries were employed to bombard suspected Chinese assembly points whenever an attack seemed possible, while the American air forces conducted over 7,000 ground attack sorties in support of UN troops. Chinese manpower reserves and tactical skills were such that they were again able to penetrate the UN lines, but they could not translate these breakthroughs into strategic victories. Mobility and logistics problems hobbled the Chinese advance from the start, giving Ridgway time to bring up American divisions held in reserve that proceeded to check and then reduce the Chinese penetrations with overwhelming firepower. As their supplies dwindled and their casualties soared, Chinese morale disintegrated and whole units began to crack under American pummeling. In the end, the Chinese pushed to the outskirts of Seoul, but were unable to retake the city.<sup>81</sup>

After the failure of the Chinese Fifth Phase Offensive, the fighting in Korea bogged down into a stalemate. Both Peng and Ridgway recognized that they could not score a decisive victory over the other. Chinese tactical skills and manpower resources essentially balanced out against American firepower, mobility, and logistics. Both sides conducted frequent limited offensives designed to secure more advantageous defensive terrain, but neither attempted a grand "end-the-war" offensive. Instead, the Chinese dug-in deep. They built elaborate trench and tunnel complexes with interlocking fields of fire, strongpoints, minefields, and hidden exits from which the defenders could launch sudden counterattacks from unexpected locations. According to Marshal Peng, the Chinese dug 1,250 kilometers of tunnels and 6,240 kilometers of trenches by war's end.<sup>82</sup> In the late summer of 1951, after the failure of China's great offensives, the USSR began to provide Beijing with modern weaponry. The Soviets sent tanks, artillery, trucks, infantry weapons, and advanced fighter aircraft such as the MiG-15 to China. This new arsenal gave the Chinese considerably more firepower than in the past and a better ability to hang on to their defensive positions.<sup>83</sup>

As a result of the sudden influx of Soviet equipment into China, the war in the air over Korea became interesting just as the war in the ground devolved into a bloody deadlock. The Chinese Communists had never had an air force before and their pilots had no more than a year of training before they took to the skies, so Beijing set only modest objectives for the new service.<sup>84</sup> Essentially, Marshal Peng asked only that the Chinese Air Force provide air defense for his ground armies. At first, the Chinese fighters tried to intercept US bombers--mostly B-29s--attacking the Chinese logistics network in northern Korea. The B-29 was no match for the MiG-15 and thus Chinese pilots began doing considerable damage to US bomber formations in late 1951. However, these operations prompted the US to deploy advanced F-86 Sabre and F-84 Thunderjet squadrons to Korea to escort the bombers and clear out the MiGs. In dogfights with the US fighters, especially the Sabres, the Chinese at first were decimated.

<sup>81</sup> Blair, pp. 715-855; Griffith, pp. 162-165; Hoyt, pp. 203-205; Paik, pp. 144-156; Ridgway, pp. 171-175; Segal, p. 102.

<sup>82</sup> Peng, p. 482.

<sup>83</sup> Blair, pp. 855-975; Griffith, pp. 169-171; Hoyt, pp. 210-211; Ellis Joffe, *The Chinese Army After Mao*, (London: Weideneld and Nicolson, 1987), p. 5; Ridgway, pp. 179-224; Segal, pp. 103-104; Spurr, p. 267.

<sup>84</sup> Chinese pilots began training on Soviet jets in 1950 and began taking delivery of MiG-15s in early 1951, before the real opening of the Soviet arsenal to China. Robert Jackson, *Air War Over Korea*, (NY: Charles Scribner's Sons, 1973), pp. 54-84.

The Sabre was a slightly more capable aircraft than the MiG, but the big difference was that virtually all of the US pilots were veterans of World War II while the Chinese were brand new to flying. Nevertheless, over time the Chinese pilots gained experience and some became quite good.<sup>85</sup>

As the size of China's air force grew and the experience of its pilots improved, Beijing tried more ambitious air operations. First, in April 1951, the Chinese attempted to make a major air effort in support of their Fifth Phase Offensive by employing large numbers of IL-10 Sturmovik ground-attack aircraft they had received from the USSR. However, in ferocious battles with the US Sabres and Thunderjets, the MiGs could not clear the sky for a major ground support effort. Their exertions were not for nothing, however, as the US was forced to call off its B-29 raids because of heavy losses.<sup>86</sup>

Next, the Chinese attempted to halt the US air campaign against Chinese lines of communication that was hampering the flow of supplies south to the front lines. In the summer and fall of 1951 the Chinese deployed 690 combat aircraft in Manchuria, of which 525 were MiG-15s, to try to gain air superiority over the battlefield. At that time, the US had only one wing of Sabres and another of F-84s in Korea. US pilots reported that the Chinese were better led, better trained, better organized and employed better tactics than in the past. Indeed, this improvement led many Americans to believe (incorrectly) that Soviet pilots were flying the Chinese MiGs.<sup>87</sup> Although the Chinese continued to be on the losing end against the Sabres, they were able to put up such huge numbers of aircraft that they began to seriously interrupt the US tactical air campaign against their logistics system. In response, the US air forces threw all their assets into a massive offensive counter-air campaign consisting of fighter sweeps and constant attacks on Chinese forward air bases. The MiGs rose in defense and fought enormous dogfights with the US fighters. Although the US was unable to knock out the Chinese air bases altogether, they shot down huge numbers of MiGs in this way. Nevertheless, in 1952, the Chinese Air Force became even more aggressive, deploying ever greater numbers of aircraft (1,800 aircraft, including 1,000 jet fighters) and flying them farther and farther south. Still, although Chinese dogfighting skills continued to improve, they could never beat the Sabre pilots and so over the course of 1952 and 1953, attrition began to wear down the Chinese Air Force, forcing it back on the defensive, and reducing its ability to interfere with other US air operations.<sup>88</sup>

With the fighting deadlocked on the ground and the US having defeated the Chinese air threat, both sides agreed to peace talks in 1951. On 27 July 1953, the senior representatives of all sides involved agreed to a ceasefire that the war to an end. Actual costs for the Chinese remain unknown, but the most recent assessments suggest that probably around 450,000 Chinese were killed in the fighting (rather than the 900,000 the Pentagon originally estimated). On the other hand, the Americans suffered over 54,000 dead, most of whom were killed fighting the Chinese.<sup>89</sup>

### *India, 1962*

In the late 1950s, Chinese control over Tibet was threatened by Tibetan opposition. In 1961, the Chinese built a new road into central Tibet to aid their ability to dispatch troops and military supplies there in the event of another revolt. For topographical and climatological reasons, the Chinese built this road across the Aksai

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<sup>85</sup> Appleman, pp. 362-363; James E. Dornan, Jr and Nigel de Lee, *The Chinese War Machine*, (London: Salamander, 1979), pp. 126-127; Robert Futrell, *The United States Air Force in Korea, 1950-1953*, (NY: Duell, Sloan and Pearce, 1961), pp. 651-655; Griffith, pp. 166-168; Jackson, pp. 54-63.

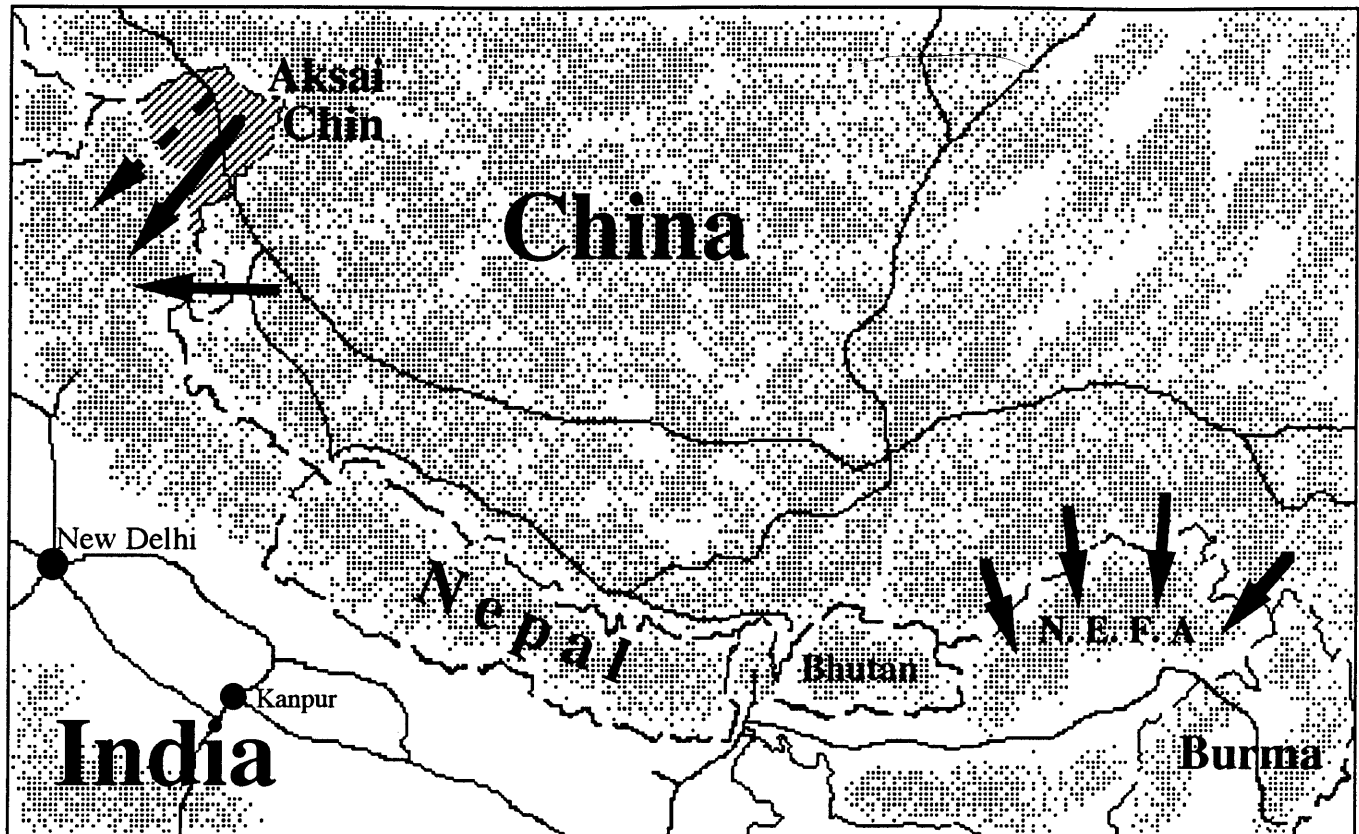
<sup>86</sup> Jackson, pp. 84-117.

<sup>87</sup> Hoyt, p. 202.

<sup>88</sup> Griffith, p. 177; Jackson, pp. 117- 153.

<sup>89</sup> Blair, p. 975; Hoyt, p. 313.

## Chinese Operations Against India, October-November 1962



- - ➤ - Chinese attacks, October 1962
- ➤ - Chinese attacks, November 1962

Chin plateau, which was Indian territory. The Chinese did not lay claim to the Aksai Chin, but since it was desolate and uninhabited they simply built their road and then deployed troops to exert their control over the plateau. In 1961, the Indians learned of this and began slowly reinforcing their provinces adjacent to the Aksai Chin preparatory to reasserting their control over the plateau. During the summer of 1962 the Chinese responded with a build-up of their own, and in July actually moved troops into Indian territory (really *further* into Indian territory) into positions where they were astride the flank of the Indian garrison in the Galwan river valley to try to intimidate the Indians into accepting Chinese control of the Aksai Chin. This time, the Indians stood their ground and the Chinese pulled back to their previous lines. A series of claims and counterclaims, threats and counterthreats then followed and, in the fall, the Chinese decided to press their case with military force.<sup>90</sup>

In October 1962, while India's Soviet benefactor was distracted by the Cuban missile crisis, the Chinese attacked the Indian positions around the Aksai Chin. On 10 October the Indians attempted to outflank a Chinese outpost in the same way the Chinese had done to the Indians in the Galwan valley in July. The Chinese, however, reacted and defeated the Indian force. Ten days later the Chinese launched their offensive.<sup>91</sup>

The war wasn't much of a contest. The Chinese greatly outnumbered the Indians, and were vastly more capable. Although the Indians actually possessed better arms and more of them than the Chinese, the Indians couldn't do anything with that weaponry. The Chinese had made very careful logistics preparations and kept their attacks limited both in terms of time and distance and thereby avoided straining their supply system. India, on the other hand, had failed to adequately prepare for the war, and so its command and control and logistics systems virtually collapsed when fighting began. The Chinese had carefully gathered information on the Indians, paying locals for information, probing their frontline positions, and sending long-distance patrols deep into the Indian rear areas. By contrast, the Indians had no idea where the Chinese were, how they were deployed, or how they fought. Given these disparities, Chinese victory was a foregone conclusion.<sup>92</sup>

In October, the Chinese attacked from the Aksai Chin. They employed their usual tactics of infiltration through gaps and around flanks, sudden attacks against unit boundaries and other weak spots, constant flanking and enveloping maneuvers, simultaneous attacks throughout the depth of the enemies positions, and rapid exploitation of breakthroughs. In this way they quickly mauled the smaller, slower Indian forces and sent them reeling. Indeed, there does not appear to have been all that much fighting because many Indian units simply collapsed under the sudden Chinese onslaught. On 14 November, the Indians regrouped and tried a weak counterattack which the Chinese easily repulsed. However, this prompted the Chinese to resume their offensive operations to force the Indians to concede. On 18 November, the Chinese launched a ferocious attack not only into northern India around the Aksai Chin, but in eastern India into the North-East Frontier Agency. The Chinese assault smashed the Indian lines and scattered their armies in just a few days, but having made their point, the Chinese stopped and retreated back to their claimed border. This new attack finally convinced India that further resistance was useless. While New Delhi refused to accede to the Chinese claim over the Aksai Chin, India stopped fighting and instead chose to ignore the Chinese presence there.<sup>93</sup>

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<sup>90</sup> Leo E. Rose, "Conflict in the Himalayas," *Military Review*, February 1963, pp. 5-10.

<sup>91</sup> Segal, pp. 141-142.

<sup>92</sup> Major Sita Ram Johri, *Chinese Invasion of NEFA*, (Lucknow: Himalaya Publications, 1968), pp. 5-6, 44, 62-63, 110-114, 141, 158, 162; Segal, pp. 146-147.

<sup>93</sup> Johri, pp. 57-173; Segal, pp. 142-146.

## *Vietnam, 1979*

In 1978, Vietnam invaded Cambodia and signed a treaty of friendship with the USSR. Cambodia was an ally of China, while the Soviet Union was China's greatest rival, hence neither of these actions endeared Hanoi to the leaders in Beijing. China decided to respond with a limited invasion of Vietnam to "teach Hanoi a lesson." Although China's actual goals have never been made clear, Beijing probably intended to destroy several Vietnamese divisions and briefly occupy (and possibly sack) the five provincial capitals closest to the Chinese border. It is fairly clear that Beijing had no further intentions because the Chinese military--by then renamed the People's Liberation Army--was ordered to go no further than 50 kilometers into Vietnam.<sup>94</sup>

By the late 1970s, the PLA had fallen on hard times. It remained the largest army in the world and could draw on enormous manpower resources, but its other assets had declined precipitously. China had begun adopting Soviet military practices in the early 1950s, but this process was stopped and largely reversed by the Great Leap Forward in 1957. The Great Leap Forward saw the purging of military leaders such as Peng Dehuai who favored an emphasis on professional expertise and reliance on Soviet conventional doctrine, rather than revolutionary ardor and single-minded devotion to Mao's revolutionary war doctrine. During the Great Leap forward and the Cultural Revolution of the 1960s and 1970s, the PLA was forced into domestic politics and then torn apart by it. By 1979, the PLA had only just begun to recover from this trauma and remained heavily politicized. The break with the USSR and Mao's insistence on a policy of autarky left the PLA with 1950s-generation weapons. China's defense industries attempted to improve on these systems, but had little luck: China's "modernized" versions of Soviet tanks and fighters were often worse than the originals. In addition, the Chinese military still suffered from an inadequate supply of heavy weapons and other equipment, and still had so few trucks that its logistics system remained heavily dependent on porters and pack animals.<sup>95</sup>

For the invasion of Vietnam, the PLA massed nearly 330,000 men in 31 of its main force divisions. These troops were equipped with nearly 1,200 tanks (all of which were Chinese designs based on the T-55), 1,500 artillery pieces, and 948 aircraft (all but 28 of which were Chinese copies of the MiG-19 and MiG-17). In actuality, however, the Chinese employed only a fraction of this force. The initial invasion was launched by 6-7 divisions, and four more were committed when the assault threatened to bog down. No more than about 80,000 Chinese troops were ever in Vietnam. The Chinese held back the overwhelming majority of their armor and artillery, and the Chinese Air Force did not participate at all.<sup>96</sup> The Chinese faced 100-150,000 Vietnamese troops with 300 aircraft including 70 advanced MiG-21s. Although Vietnam had two regular army divisions near Lang Son and another five around Hanoi, most of its troops in the north were in Border Guard and Economic Construction divisions. These titles are misleading. In 1979, the Vietnamese Economic Construction Divisions actually were among the best units in Hanoi's army. They were fully-equipped with tanks, artillery and other heavy weapons and were composed entirely of somewhat older soldiers, which in 1979 meant that they

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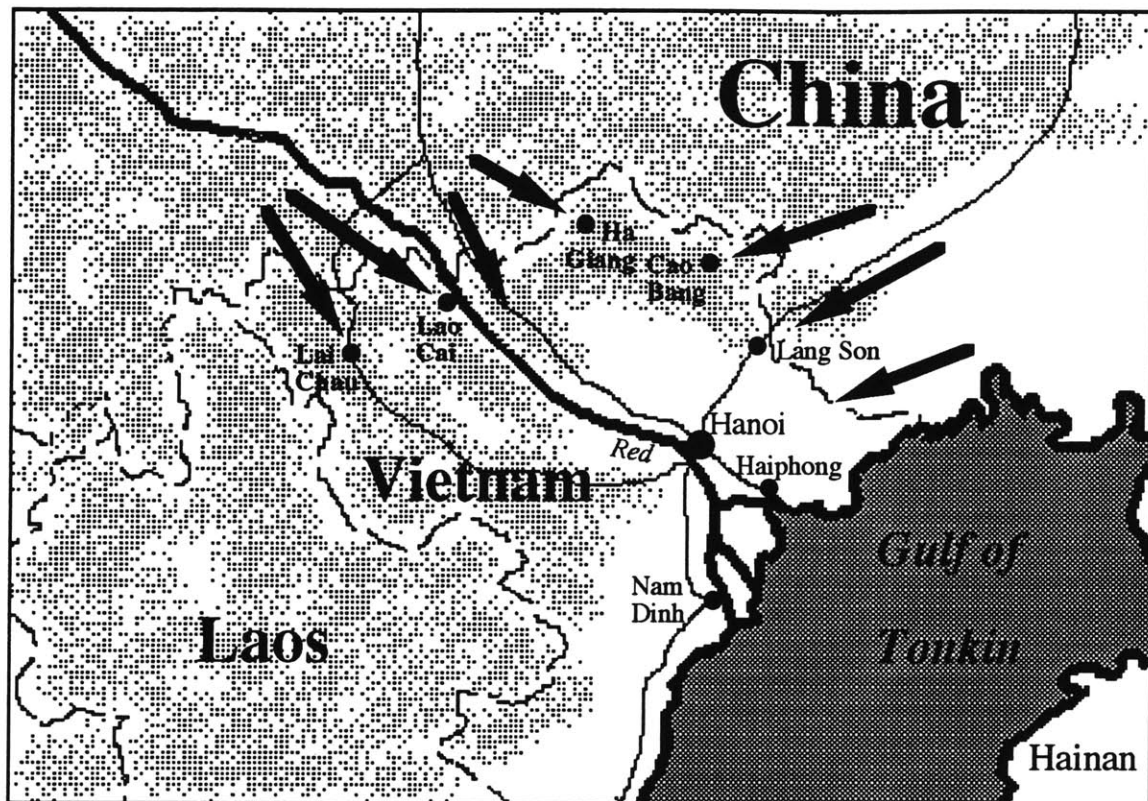
<sup>94</sup> King C. Chen, "China's War Against Vietnam, 1979: A Military Analysis," *Journal of East Asian Affairs*, Vol. III, No. 1, Spring/Summer, 1983, pp. 240-241; Major Jer. Donald Get, US Army, "Lessons Learned in Vietnam: PLA," *Military Review*, 1979, p. 20; Harlan W. Jencks, "China's 'Punitive' War on Vietnam: A Military Assessment," *Asian Survey*, Vol. XIX, No. 8, August 1979, p. 809.

<sup>95</sup> Joffe, pp. 2-95; William T. Tow, "Chinese Strategic Thought: Evolution Toward Reality," *Asian Affairs*, Nar-April 1980, pp. 251-252.

<sup>96</sup> It has been well documented that the Chinese held back their air force because they feared the more experienced and better armed Vietnamese air and air defense forces. However, it is unclear why China massed so large a force and then committed only a part of it to battle. It may be that the extra troops were present in the event the war got out of hand, or else it may be that the poor terrain and the way that it channeled PLA advances simply prevented the Chinese from bringing these other forces to bear.



# The Chinese Invasion of Vietnam, February-March 1979



➔ - Chinese Attacks, February-March 1979



were all seasoned veterans of the wars against the US and the Republic of Vietnam.<sup>97</sup>

The Chinese attacked on 17 February 1979 at 26 points along the Sino-Vietnamese border and initially made rapid progress. The Chinese had infiltrated considerable numbers of troops and even Type-62 light tanks (miniature versions of the T-55) into Vietnam before the attack. These forces, plus the advantage of surprise, allowed the PLA to cover considerable ground during the first few days. However, less than a week into the invasion, the Chinese advance began to bog down. The heavy vegetation and mountains of northern Vietnam created immediate problems for the Chinese, channeling the movement of their armies along the roads and making it impossible for them to spread out into the countryside and maneuver freely against the Vietnamese. The Vietnamese Economic Construction divisions proved to be very formidable adversaries. They blocked the roads and frequently outmaneuvered the Chinese when PLA units tried to flank Vietnamese blocking positions. Chinese tanks lacked the armor to simply bull their way through Vietnamese units well-equipped with RPGs and other antitank weapons, but the terrain frequently would not allow them the room to maneuver off-road either. The Chinese were forced to conduct deliberate assaults to overcome these Vietnamese positions, and the PLA found that they weren't nearly as good at such set-piece operations as they were at more free-wheeling operations, mostly because they lacked the firepower and communications needed to conduct a well-orchestrated deliberate attack on a fortified position. Chinese units quickly outran their logistics columns, forcing pauses until porters and donkeys could bring up much needed food, ammunition, and other supplies. The absence of rank designators on Chinese uniforms caused a surprising degree of confusion among their forces. Finally, all of these problems proved to be a serious drain on Chinese morale.<sup>98</sup>

By the second week of the war, these problems were threatening to turn the invasion into a disaster. Chinese columns were taking heavy casualties and had slowed to a crawl in many places. Unable to conduct their flanking and enveloping moves, the Chinese had failed to destroy any sizable Vietnamese units while reinforcements coming up from the Hanoi area continued to bolster the Vietnamese defenses. Nevertheless, the Chinese had taken four of the five provincial capitals and on 27 February they reached the outskirts of Lang Son--the most important of the five--sitting at the mouth of the pass into the Red River valley. The Chinese began their assault on Lang Son by using combined arms teams of infantry, armor and engineers to work their way around both flanks of the Vietnamese defenses in the city, isolating the town and its defenders and securing the high ground on all sides. On 2 March, the Chinese forces began a house-to-house clearing operation that lasted for three days. At that point, having accomplished at least part of their objectives, and fearful that further operations would result in catastrophe, Beijing declared victory and went home.<sup>99</sup>

The PLA took two weeks to withdraw from Vietnam, with the last soldier crossing back into China on 17 March. The Vietnamese were glad to see the Chinese go and so did not harass them or take any other actions that might slow the withdrawal. King C. Chen provides the following figures for losses on both sides:<sup>100</sup>

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<sup>97</sup> Chen, pp. 242-248; Dornan and de Lee, p. 87; Jencks, pp. 807-808; Douglas Pike, *PAVN: People's Army of Vietnam*, Da Capo Paperback Edition, (NY: Da Capo, 1986), p. 104; Segal, pp. 218-219; Tow, p. 253.

<sup>98</sup> Chen, pp. 246-250, 259; Joseph F. Innis, "China," in Richard A. Gabriel ed., *Fighting Armies: Non-Aligned Third World and Other Ground Armies, a Combat Assessment*, (Westport: Greenwood Press, 1983), p. 32; Jencks, pp. 809-813; Pike, p. 104; Segal, p. 219.

<sup>99</sup> Chen, pp. 253-256; Jencks, pp. 810-813; Segal, p. 219.

<sup>100</sup> Chen, p. 257. Joffe's figures concur with Chen's at least for Chinese casualties. See, Joffe, p. 95.

	<u>Chinese</u>	<u>Vietnamese</u>
Dead	26,000	30,000
Wounded	37,000	32,000
Taken prisoner	260	1,638
Armored Vehicles lost	420	185
Artillery pieces lost	66	420

Other sources, including senior Chinese military officers have suggested that Vietnamese casualties may be exaggerated and may only be half of these figures.<sup>101</sup>

### **Patterns of Chinese Military Effectiveness**

Overall, Chinese military forces enjoyed a mixed record in combat. They mostly fought very well during the Korean War, knocking the UN armies out of North Korea and then fighting them to a draw around the 38th parallel. The Chinese also fought well in 1962, dispatching the weak, unprepared Indians with minimal effort. China's greatest problems occurred in Vietnam, when it finally faced an adversary with equal tactical skill and numbers as well as superior firepower. Of greater importance, the specific performance of Chinese military forces in battle showed little similarity to that of the Arab armies. Although there were areas of overlap, primarily related to limited technical skills, even in these cases the similarities were far from identical.

### *Chinese Strategic Leadership Performance*

China's generals mostly showed a high degree of competence. Peng Dehuai obviously stands out as a superb commander, but Beijing's generalship in its other wars was also very good.<sup>102</sup> By and large, Chinese generals did not impede their war effort and usually helped it greatly. In particular, Chinese generals seemed to have had an excellent understanding of the strengths and weaknesses of their own forces and carefully crafted their operations to suit those capabilities. On the other hand, if China's generals did have one common failing it was that they did not seem to have a good grasp of the strengths and weaknesses of their adversary. While this was not very problematic in Korea or India, in Vietnam, it was a major contributor to China's difficulties.

Chinese strategy in all of their wars was very well conceived. Peng's various offensives in Korea were true masterpieces and had UN forces been less mobile and his logistics system been more mobile, the UN might easily have been thrown off the peninsula altogether. Even working under these constraints his operations achieved incredible results. His offensives always featured a single-minded concentration of forces against the decisive points coupled with deft maneuvers to confuse and cut-off enemy formations. Nor would it be fair to criticize Peng for failing to incorporate his own logistical weaknesses and the enemy's mobility into his planning: Peng's mission, throw the UN off the Korean peninsula, probably was unattainable given the capabilities of his forces, yet he came remarkably close and it is very difficult to imagine how he might have done better. The Indian offensives bear little comment because the opponent was so weak, but even in this case, the Chinese developed a first-rate plan that smashed Indian forces across a lengthy front and then allowed their own forces to pull back with little threat of further hostilities. In Vietnam, the Chinese plan was quite good in the abstract, envisioning a massive attack on a wide front to prevent the Vietnamese from being able to concentrate their forces against a single axis of advance, plus wide flanking maneuvers

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<sup>101</sup> Jencks, pp. 812-814.

<sup>102</sup> General Ridgway had nothing but praise for his Chinese opposites, see Griffith, p. 171. Also, see Spurr, p. 4.

to envelop and destroy forward Vietnamese units. The problem, of course, was that Chinese planners badly misread both the trafficability of the terrain in northern Vietnam and the capabilities of the Vietnamese forces deployed there.

The direction of Chinese operations also was first-class in every category. China's military moves were thoroughly planned and meticulously prepared. Chinese generals used feints, deception, disinformation, and maneuver in superb combinations to achieve surprise and defeat otherwise superior opponents. They were extremely diligent about reconnaissance and intelligence operations. Although willing to pay heavily in casualties, it is difficult to say they squandered lives: Chinese operations were well thought-through and there was a clear, well-reasoned purpose to their sacrifices. Chinese strategic leaders kept the control and organization of their forces simple and straitforward and commanded enormous armies with remarkably primitive communications systems. Chinese offensives were noteworthy for consistently securing surprise, uncovering the weak sectors in an enemy's defense, concentrating overwhelming force at the decisive point on a battlefield, and forcing the enemy to fight at a disadvantage through rapid maneuver. On the defensive, Chinese operations were marked by a thorough appreciation for the terrain, extensive and well laid-out fortifications, and an ability to sense the flow of battle and shift forces appropriately in response to changes.<sup>103</sup>

#### *Chinese Tactical Leadership Performance*

Chinese junior officers performed equally well, or even better, than their generals. Like the Chadians, the Chinese employed a highly decentralized command system that placed a heavy burden on tactical leaders. Because Chinese operations were often conducted at night, involved large-scale infiltrations, had few radios, and placed a premium on stealth, it was often impossible for senior commanders to direct their forces in the midst of battle. The Chinese also placed a premium on decisions made on the spot in response to immediate circumstances. In particular, they emphasized the immediate exploitation of gaps and weak points such as unit boundaries, which meant that junior officers were expected to recognize such opportunities and act on them without direct orders.<sup>104</sup> As Edwin Hoyt observes, "The nature of the Chinese Red Army, with its paucity of modern military equipment, placed a great deal of responsibility on unit commanders, they were to follow the general plan if they could, but not be afraid to deviate if it seemed appropriate."<sup>105</sup> Indeed, virtually all Chinese operations were planned only at general levels, and the specifics were invariably left up to the commanders in the field to decide as the circumstances dictated.<sup>106</sup>

Chinese junior officers performed extremely well in this system. They kept up a constant stream of patrols to find the enemy, and then probe for routes of attack, flanks, gaps in the line, unit boundaries, etc. Once they had a good picture of enemy dispositions they formulated a plan of attack and put it into action. They showed tremendous individual initiative and aggressiveness. They rarely seemed to let an opportunity pass and reacted quickly and flexibly to the ebb and flow of combat. When one approach failed, Chinese junior officers devised a new plan and then acted on it. They also showed a real flare for improvisation in their approach to combat situations. As an example of this, in 1950 one Chinese company commander had his men light the dried grass near an

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<sup>103</sup> Appleman, pp. XIII, 28, 133-134, 202; Chen, pp. 249-250; Griffith, pp. 129, 134, 142, 148, 171; Hoyt, pp. 138, 166; Innis, p. 32; Johri, pp. 44, 80; Marshall, *The River and the Gauntlet*, p. 70; Spurr, pp. 81, 191-219, 252.

<sup>104</sup> Segal notes that during the invasion of Vietnam, division headquarters mostly had to communicate with one another and with their subordinate formations by runner because so few radios--and trained radio operators--were available. Segal, p. 95.

<sup>105</sup> Hoyt, p. 96.

<sup>106</sup> Appleman, pp. 162, 154-211; DIA, pp. 30-31, 66; Get, p. 22; Griffith, p. 132; Hoyt, pp. 110, 138; Jofe, p. 95; Johri, p. 173; Marshall, *The River and the Gauntlet*, p. 85.

American position on fire when they could not find a way to flank the American lines. The grass burned straight up the hill the Americans were holding, forcing them to abandon the position. Another illustration of these various traits is that within days after the invasion of Vietnam, the Chinese had devised and disseminated a completely new set of tactics for dealing with Vietnamese ambushes that proved quite effective.<sup>107</sup>

Chinese tactical units operated at a quick operational tempo, especially given their lack of motor transport. Chinese junior officers fully recognized the need to hit hard and fast and to keep hitting the enemy with rapid blows so that he could not recover. Consequently, they bypassed resistance when possible and drove as far and as fast into the rear as possible to overrun command posts and keep the enemy reeling. In one incident during the Korean War, Chinese troops smashed the ROK 15th Infantry Regiment and then pursued so quickly that they passed the retreating South Korean troops, overran the regiment's command post and then turned to ambush the combat units (again) as they fled south.<sup>108</sup> Even when one Chinese unit might stop to regroup on an objective, other elements of the force--or other units of the same formation--would take it upon themselves to keep moving forward to maintain the pace of advance and not give the enemy any breathing space.<sup>109</sup>

One of the greatest strengths of the Chinese military at every level was their predilection for maneuver. The PLA's favored form of attack--and counterattack--was what Lin Biao referred to as the "one point, two sides" maneuver, which consisted of a frontal assault to pin the enemy coupled with a double envelopment. Chinese forces at every level from army group to squad employed this approach, and when it proved impossible, they found other ways to maneuver against their foe, performing a single envelopment or simply attacking from an oblique angle to the defender's lines. American, South Korean, Turkish, British, and later Indian troops reported being constantly outflanked and hit from the rear by Chinese units. Beijing's tactical commanders also did a superb job of getting deep into the rear of an enemy formation and waiting on its route of escape to spring an ambush.<sup>110</sup>

These traits were equally apparent in defensive operations. Chinese tactical commanders were just as diligent about reconnaissance when on the defensive. They were careful to disguise their positions and built ingenious defensive networks. Chinese forces also were extremely active on defense and rarely sat passively in their trenches while being attacked. In battle, Chinese units would abandon their positions if they thought that they could move into a better one, preferably one from which they could fire or counterattack into the attacker's flank or rear. Chinese units counterattacked vigorously and quickly at every level. Indeed, many Chinese defensive positions were

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<sup>107</sup> Appleman, pp. 68-159; Blair, pp. 375-975; Chen, pp. 249-250; DIA, pp. 30-31, 37, 160; Dornan and de Lee, p. 31; Griffith, pp. 131, 169; Hoyt, pp. 126, 150; Innis, p. 42; Johri, pp. 44, 80, 88, 110-114, 130, 141, 162; Marshall, *The River and the Gauntlet*, pp. 60, 73, 144, 164, 201-203, 330; Peng, p. 475; Spurr, pp. 179, 224. The fact that Chinese junior officers continued to demonstrate the same initiative, creativity, flexibility, and independence after the Cultural Revolution is yet further proof of the limited impact of commissariat politicization on the lower echelons of an officer corps. The Cultural Revolution was politicization on a totalitarian scale. It reached down into the rank and file of the PLA in a way that Saddam Husayn and Hafiz al-Asad never could. Yet Chinese tactical commanders continued to show the same superb leadership qualities they displayed in Korea and India.

<sup>108</sup> See Appleman, p. 152.

<sup>109</sup> Appleman, pp. 80-81, 135-137, 179; DIA, p. 37; Hoyt, p. 104; Johri, p. 164; Ridgway, p. 54; Spurr, pp. 137, 289.

<sup>110</sup> Appleman, pp. XIII, 98, 134; Blair, pp. 375-975, esp. p. 382; Chen, p. 249; DIA, p. 37; Griffith, pp. 143-144; Hoyt, pp. 142, 146, 149, 160; Innis, p. 42; Jencks, p. 810; Johri, p. 68, 80-87; Marshall, *The River and the Gauntlet*, pp. 105-193, 330; S.L.A. Marshall, *Infantry Operations and Weapons Usage in Korea*, (London: Greenhill Books, 1988), [First published in 1953], p. 128; Paik, pp. 85-91; Segal, pp. 147, 219; Spurr, pp. 81, 137, 288.

designed to lure the enemy in and crush him with a devastating counterattack (often from several sides simultaneously).<sup>111</sup> Whenever possible, the Chinese attempted to conduct flanking counterattacks to cut-off the attacking force and crush it. Moreover, if they repulsed an attacker, Chinese units frequently seized the opportunity to pursue or even launch an immediate attack of their own.<sup>112</sup>

The Chinese appear to have done adequately in combined arms operations when their limited experiences are taken into account. In Korea, at first the Chinese employed pure infantry formations, but by the end of the war also fielded considerable numbers of artillery batteries. By and large, the Chinese did well in employing their artillery to support their infantry formations both when attacking and in defense. Again, in India, the Chinese committed only infantry and artillery, and again these two combat arms worked well together. Moreover, in both of these wars the Chinese also did an excellent job using combat engineers to support their combat operations. The invasion of Vietnam presented a bit more of a test since it was the first time the Chinese went to war with sizable numbers of tanks and other armored vehicles. Although there were numerous problems, overall the Chinese seem to have done adequately combining armor, infantry, and artillery. In particular, around Lang Son these three arms, plus the engineers, worked reasonably well together isolating and then reducing the defenders of the city.<sup>113</sup>

#### *Chinese Rank and File Performance*

China's soldiery did all that could be expected of them. Personal bravery among Chinese units was very high, especially during the Korean War. Chinese unit cohesion was likewise excellent all three wars. Although numerous Chinese units did begin to crack in 1951 at the end of the Fifth Phase Offensive, what was impressive was just how much hardship and adversity these formations endured before they began to come apart. By that time, many of the Chinese soldiers were literally starving to death, clinically exhausted, and numbed by five months of attacks into the teeth of UN firepower. Most armies would have fallen apart long before. Similarly, in Vietnam, despite heavy losses and constant setbacks, Chinese units remained effective and cohesive and fought on, trying to salvage victory from their stalled invasion.<sup>114</sup>

Chinese morale was mostly high, although Vietnam may have been an exception. In Korea and India, the Chinese Army attacked with tremendous confidence and enthusiasm. In Korea, this remained the case until the cold, the lack of food and other supplies, as well as the terrifying losses in combat began to set in during 1951.<sup>115</sup> In 1979, Chinese morale appears to have been good, but fragile. Beijing's armies attacked with high hopes. Indeed, many soldiers may have hoped that a great victory over a foreign foe would restore the professional pride of the PLA and help put the horrors of their involvement in the Cultural Revolution behind them. Beneath this hopeful facade, there appear to have been many doubts about the harm done by the Cultural Revolution and its concomitant politicization. Thus, when reverses on the battlefield began to make clear some of the problems created by the Cultural Revolution, such as the failure to modernize, the inattention of many soldiers and officers to military training, the abolition of the rank structure, and the encouragement of revolutionary zeal over military

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<sup>111</sup> After the Battle of Susangerd in 1981, the Iraqis also learned this tactic and attempted to employ it frequently afterwards. The difference between the Iraqis and the Chinese, however, was that the Chinese consistently made it work and the Iraqis rarely did.

<sup>112</sup> Appleman, 241-243, 252-255, 246-283; DIA, p. 29; Griffith, p. 169; Hoyt, p. 159; Marshall, *The River and the Gauntlet*, pp. 27, 304-342; Marshall, *Infantry Operations*, p. 130; Paik, pp. 176-177.

<sup>113</sup> encks, pp. 811-813.

<sup>114</sup> See in particular, Chen, pp. 246-256; Spurr, 260-313.

<sup>115</sup> Griffith, p. 130; Spurr, p. 119.

professionalism, PLA morale dropped quickly.<sup>116</sup>

Chinese weapons handling was mostly poor, albeit with several bright spots. Chinese marksmanship was lousy in all of their wars. Chinese infantrymen could do little with their small arms. One exception to this rule was that, at least in Korea, Chinese units were inexplicably good with light machine guns.<sup>117</sup> Chinese forces also suffered heavily from the limited technical skills of their personnel. Consequently, few could handle electronics equipment, heavy weaponry, or other technology intensive machines. To at least some extent in each of their wars, the Chinese had to forego certain weapons that were simply beyond the technical skills of their men. Moreover, Chinese troops rarely got the maximum performance out of even the relatively simple weaponry they employed. For example, Chinese tank crews did little with the relatively simple T-55 knock-offs they drove into Vietnam. Chinese tanks sometimes fought by rushing blindly at Vietnamese positions, and often were employed in terrible terrain where they were easy prey for RPG-equipped anti-tank teams.<sup>118</sup>

By contrast, Chinese artillery and mortar operations were very competent. Although Chinese forces entered the Korean War with only light mortars and almost no artillery, by 1952, they had learned to employ their new Soviet-supplied indirect-fire weapons in a fairly sophisticated manner. As the Korean war progressed, the ability of Chinese mortar and artillery units to mass their fire became an important element in their defensive operations. Chinese artillery batteries could rapidly combine their fire even when geographically dispersed, their fire missions were often very accurate, and they could quickly and flexibly shift their fire from one target to the next as required by frontline commanders. Chinese mortar units even got so good that they could silence US mortars in "counter-mortar" duels.<sup>119</sup> In the Sino-Indian war, the Indians found Chinese artillery fire to be "accurate and overwhelming."<sup>120</sup> It remains unclear how well Chinese artillery units performed in Vietnam.

#### *Chinese Combat Support and Combat Service Support Performance*

Above all else, logistics was the bane of Chinese military operations. In Korea, China might have scored one of the most impressive victories in modern history had its supply services been able to keep pace with its combat units and had its combat units been able to move faster than they did. As Hoyt said of Marshal Peng, "It was not the Americans who were defeating him; it was winter, and the Chinese inability to fight this sort of war on a straight offensive basis. The logistics of an attacking army are perhaps six times more difficult than those of a defending army, and Marshal Peng's logistics, by his own statements, were so ridiculous as to be laughable."<sup>121</sup> Against India, the Chinese had the advantage of a far less demanding political-military objective than was the case in Korea. Consequently, the Chinese were able to structure their operations so that their logistical weaknesses never became an issue. By conducting assaults that lasted for only a few days and sending combat units no further than a few dozen miles into India before retreating, the Chinese minimized the strain on their logistics system: provisions could be stockpiled well in advance of the assault and the soldiers could fight these brief campaigns essentially with just the supplies they normally carried with them. Beijing attempted to do the same thing in Vietnam, but the terrain and the unexpected skill and

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<sup>116</sup> Chen, pp. 249, 259.

<sup>117</sup> Appleman, p. 127; Marshall, *The River and the Gauntlet*, pp. 233, 258; Marshall, *Infantry Operations*, p. 72.

<sup>118</sup> Dornan and de Lee, p. 94.

<sup>119</sup> Appleman, pp. 118, 173, 178, 185; DIA, p. 35; Griffith, p. 169; Marshall, *The River and the Gauntlet*, pp. 141-142, 149, 159; Ridgway, p. 218.

<sup>120</sup> Segal, p. 147. Also see, Johri, p. 68.

<sup>121</sup> Hoyt, p. 174.

firepower of the Vietnamese unraveled their plans. Rather than a quick blitzkrieg that would overrun a narrow strip along the border and maul a few Vietnamese divisions before the PLA was called back, the Vietnamese invasion stretched out into a grinding attrition battle lasting a full month. This miscalculation--plus the increased needs of Chinese forces because of their greater compliment of motor transport and armored vehicles--crippled the Vietnam campaign just as it had crippled Marshal Peng's offensives in 1950 and 1951.<sup>122</sup>

The causes of these logistics problems may not be as clear as they may seem. The most obvious problem the Chinese faced was that they had too few trucks and trains to supply their army--and too few air defenses to protect the logistics network from air attack. In addition, there were other "material" complications that contributed to these problems. For example, in Korea, Chinese forces used a multitude of small arms, none of which were manufactured in China and most of which were no longer manufactured at all. Consequently, providing ammunition and spare parts to the combat units was a nightmare. However, it is unclear whether Chinese logistics problems also were related to China's low levels of education or other socio-economic factors. Logistics for an army that is even crudely modern requires quartermasters able to read and do arithmetic and often more complicated mathematics. In addition, supplying such a vast army, over such great distances (in Vietnam, Chinese forces were deployed across a 400-kilometer front, while in Korea they were 300 kilometers from their railheads), with such a multitude of different weapons, is a complex project to say the least. The available evidence does not indicate whether an inability to handle this complexity was one element of the Chinese problem with logistics.

Similarly, too little information exists to assess China's maintenance capabilities. I have uncovered only one piece of evidence regarding Chinese maintenance, namely that during October and November 1951, the Chinese generally were able to keep 300-400 of their 800 trucks running on any given day.<sup>123</sup> A 50 percent operational readiness rate is usually considered very poor, and this would fit well with the pattern of difficulties the Chinese experienced in other aspects of military operations related to technical skills. Still, it would be rash to conclude based on this single scrap of evidence that Chinese armies experienced considerable problems with maintenance and repairs. The Chinese were using mostly very old trucks captured from the Kuomintang and the Japanese. It is unclear what kind of shape they were in when the Chinese Communists got them, or what kind of an inventory of spare parts and lubricants they had. Moreover, 800 trucks is an absurdly low number of trucks to try to support an army of over 300,000 men so those trucks may have been driven to death. For all of these reasons, this meager evidence on its own cannot support the conclusion that Chinese maintenance practices were poor, even though this would fit the pattern suggested by Chinese problems with logistics and weapons handling.

The evidence does make clear, however, that China's technical establishment was fairly mediocre. Beginning in the 1950s, the Chinese began a major effort to build a military-industrial infrastructure capable of supporting the Chinese armed forces in every aspect of military operations. The Chinese were one of the few nations to try to develop such an across-the-board capability for indigenous weapons development and production. The Chinese enjoyed some notable successes, such as their development of nuclear weapons and ballistic missiles. However, these successes have come in relatively small programs which, like the Arab states, have commanded lavish resources and the nation's best minds. In the vast majority of more mundane projects, the Chinese have fared poorly. For example, Chinese combat aircraft and tank designs have been very bad.

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<sup>122</sup> Appleman, p. 351; Griffith, p. 138; Hoyt, pp. 167, 174, 179; Jencks, p. 813; Joffe, p. 30; Paik, p. 121; Ridgway, p. 73; Segal, p. 95; Spurr, pp. 118-119, 170, 249, 253, 301-305.

<sup>123</sup> Spurr, p. 170.

They rarely have been able to make much progress beyond the 1950s Russian technology with which they began, and in many cases, Chinese "improved" versions have proven worse than the original.<sup>124</sup> For instance, US military officers who observed recently-delivered Chinese Type-69s in Pakistan reported that the tanks belched smoke like steamships because they leaked so much oil onto the engine block while operating.<sup>125</sup> In particular, the Chinese have had trouble with the more sophisticated elements of these systems, such as weapons guidance and aircraft avionics.<sup>126</sup>

Limited evidence suggests that Chinese combat engineers are reasonably good. Although the Chinese have been known to do things like use infantry battalions to clear paths through minefields by having them walking across in line-abreast, they generally have been able to rely on a competent corps of engineers. In Korea, Chinese engineers built impressive fortifications very quickly. In Vietnam, Chinese engineers performed amazing feats in trying to get PLA units through the difficult terrain. In particular, in all of their wars, Chinese engineers have shown a tremendous ability to cross water obstacles. During Korea, the US Air Force was constantly frustrated by the speed and ingenuity of Chinese engineers building, repairing, and circumventing bridges knocked down by US airstrikes.<sup>127</sup>

With a few exceptions, Chinese intelligence has been superb. The PLA's tactical intelligence has performed especially well in China's various wars. In Korea, UN commanders were astonished at the extent of Chinese knowledge of the UN order of battle, deployment, and capabilities. Likewise, in India, Chinese intelligence was a major contributor to the ease of victory: their tactical intelligence services knew the location and capabilities of virtually every Indian unit as well as New Delhi's command and control scheme, and they predicted virtually every Indian move ahead of time.<sup>128</sup> Chinese strategic intelligence, on the other hand, did not always match the consistently superb performance of Chinese tactical intelligence. China's strategic intelligence was more heavily subject to the effects of politicization, especially in the immediate aftermath of the Cultural Revolution. This almost certainly accounts for their dramatic misunderstanding of Vietnamese capabilities and intentions in 1978-1979. On the other hand, the Chinese badly misunderstood UN (really US) capabilities before their intervention in Korea and here the problem seems not to be politicization, but the insularity of the Chinese Communists who failed to understand US industrial might.<sup>129</sup>

### *Chinese Air Force Performance*

China's air force turned in its best performance during the Korean War, during which it made a reasonable effort given its newness. The Chinese did not necessarily do "well" in any category of air operations, but deserve high marks for learning quickly. After Korea, the Chinese Air Force can only have been said to have done badly. It played no role in the 1962 war against India, and in 1979 it was judged by Beijing too weak to play any role in the invasion of Vietnam.

The planning and direction of Chinese air operations was reasonably good. Chinese Air Force leaders recognized that initially their squadrons were only capable of defensive counter-air missions, and so they concentrated on trying to disrupt the US campaign against Chinese logistics. Later, as the forces available to them improved, they took on more ambitious missions. The Chinese quickly deduced the weaknesses of the F-86 Sabre--specifically, its limited range--and designed tactics to try to take advantage of

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<sup>124</sup> Innis, pp. 37, 49; Joffe, pp. 8, 95-96.

<sup>125</sup> Author's interviews with US military personnel, June, 1993.

<sup>126</sup> Joffe, p. 96.

<sup>127</sup> Griffith, p. 158; Jackson, pp. 82-83; Johri, pp. 112-114.

<sup>128</sup> Innis, p. 42; Johri, p. 141; Paik, pp. 96-97; Segal, p. 147.

<sup>129</sup> Joffe, p. 95.



that problem. Although the US quickly countered, the Chinese in turn devised a counter to the Americans' counter-tactic. The US ultimately prevailed in this contest, but this rapid interplay indicates that Chinese Air Force leaders were intelligent, creative, and resourceful and actively tried to shape aerial encounters, rather than passively accepting situations as they occurred.<sup>130</sup>

Chinese air forces concentrated almost exclusively on counter-air missions, consequently, this is the only category of air operations in which the Chinese performance can reasonably be assessed. The Chinese began very poorly but had made major improvements by war's end. The chief factor was the experience of Chinese pilots. At the start of the war, the Chinese Air Force was brand new and had only a handful of qualified pilots, none of whom had participated in air-to-air combat before. When these men went up against the World War II veterans of the US Air Force (a significant number of whom were aces already) they were slaughtered. The Chinese began sending large numbers of pilots to the USSR for training, and over time, they began to acquire confidence in their flying skills and began to give the American pilots a harder time. There was never a month during the Korean War when Chinese MiG squadrons did more damage to the Americans than they sustained themselves, but by 1952 they had reduced the number of losses they were taking and had increased the number of US planes they were shooting down. Nevertheless it is still the bottom line that, throughout the war, the Chinese never performed as well as the Americans in air combat maneuvering. They fought aggressively, and they maneuvered, and some of their pilots were able to really exploit the capabilities of their aircraft, but they were never able to do it at the same level as the Americans. As a result, US Sabre pilots racked up a 10:1 kill ratio against the Chinese for the war.<sup>131</sup>

### **Decisive Factors in Chinese Military Campaigns**

Chinese forces did as well as they did in combat for several reasons. Chinese leadership at both strategic and tactical levels was unquestionably the most important factor in Chinese successes. China's generals did a superb job employing the resources at their disposal to achieve Beijing's political objectives. In many of their campaigns, the Chinese achieved spectacular results that almost certainly would have been beyond the reach of less competent generals commanding the same forces. Similarly, it is difficult to fault Beijing's generals for Chinese defeats: in Korea, their task may well have been impossible, while in Vietnam their greatest sin was in underestimating their opponent. As observed previously regarding Iraq, misjudging one's opponent may have been an important mistake, but it hardly demonstrates incompetence. Moreover, assuming that the Chinese political leadership would have ordered the invasion regardless, it is unclear how their generals might have fought the campaign against Vietnam differently even had they known that the terrain and the enemy would be such difficult foes. Thus even in this case, the Chinese generals seem to have done a very good job given their situation.

Chinese tactical competence was just as important as the skill of their strategic leadership. In battle, the Chinese were an extremely dangerous foe, and what is so incredible is that they achieved this level of tactical prowess despite pitiful weaponry and illiterate soldiers mostly incapable of taking full advantage of the meager equipment they possessed. It is remarkable that in Korea Chinese infantry companies of roughly 100 men equipped with no more than a few dozen rifles, perhaps three or four light machine guns and maybe a light mortar or two, could attack entrenched American units of roughly equal size but lavishly armed with the most modern weapons in the world and defeat them with relative ease. In every war they fought, Chinese units displayed this tactical

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<sup>130</sup> Jackson, esp. pp. 73-85.

<sup>131</sup> Appleman, pp. 212, 362; Dornan and de Lee, pp. 126-127; Futrell, pp. 651-655; Jackson, pp. 54-153; Spurr, p. 136; Whiting, p. 135.

excellence, virtually all of the credit for which must go to Chinese tactical commanders from squad to division levels. With the notable exception of the US Marines, the Americans were never able to match Chinese tactical skills in Korea and only were able to achieve a stalemate through the application of overwhelming firepower to bleed the Chinese army white--and they could do so only because Chinese logistical failings prevented their being swept off the peninsula entirely. By contrast, in Vietnam, the Chinese fared poorly mainly because they faced an adversary that not only possessed superior weaponry, but also was equally good at tactical maneuver.

Another important aspect of China's victories was its superb intelligence capabilities. In Korea and India, China won the intelligence war, and in doing so, went a great distance toward winning the entire war. China's constant attention to reconnaissance and its persistent efforts to gather information on its adversary in any way possible usually gave Chinese military leaders at all levels an excellent understanding of the adversary they faced. On the other hand, China's meticulous attention to operational security and CC&D prevented their enemies from knowing much if anything about their own operations. The Chinese moved over 300,000 men into Korea without the United States really realizing it. Chinese platoons and battalions often passed right under the noses of US, ROK and Indian units before and during a battle. Even in Vietnam, although they underestimated the capabilities of their opponent, the Chinese had a detailed understanding of Vietnamese deployment, organization, and equipment while the Vietnamese were caught completely off-guard by the Chinese invasion.

Chinese military setbacks were largely the product of two weaknesses: logistics and weaponry. Chinese deficiencies in supplying and moving their forces were literally crippling. This is demonstrated by the fact that China's least problematic military campaign was that against India, which was purposely structured to minimize the need to rely on their logistics system. In both Korea and Vietnam, the Chinese did not have that luxury and their logistics system failed them. In Korea in 1950-1951, this failing was unquestionably the most important factor that prevented China from turning a remarkable victory into a decisive one.

China's arsenal was its other great problem. The Chinese simply lacked the equipment that many of their adversaries possessed, both in terms of quantity and quality. In Korea the gap between the arms of a US, or even a ROK, unit and those of comparable Chinese units was immeasurable. Even in Vietnam, the Vietnamese had far more advanced Soviet weaponry than did the Chinese, and the Vietnamese usually had more of them. Nevertheless, China's deficiencies in terms of arms should not be exaggerated: the Chinese armed forces achieved stunning successes despite this problem, and their defeats do not seem to have been the result of deficiencies in weaponry. Had the Chinese been better armed, their operations undoubtedly would have been even more successful, but there is no reason to believe that this would have compensated for the logistical problems that brought their Korean offensives to a halt or for the terrain and tactical skill of Hanoi's veteran soldiers that thwarted them in Vietnam.

An important aspect of this issue is whether Chinese deficiencies in weaponry and logistics were purely the product of their poverty, or the result of an inability among Chinese personnel to read and write, to understand machinery, and to handle the complex requirements of a modern army. Was the problem simply that the Chinese could not afford to build or buy adequate numbers of modern arms, trucks, and combat consumables? Or, was the problem that even had Beijing been able to acquire adequate supplies of this materiel it would have made little difference because Chinese soldiers and officers would have been unable to employ them properly? This is a crucial question for the underdevelopment theory. If the problem is simply one of availability, then this says little about the behavioral patterns claimed by the theory. Specifically, it would discredit the underdevelopment theory as an explanation for Arab military ineffectiveness, because in most of their wars the Arab armies had a surfeit of weapons, mobility assets, and supplies. Unfortunately, very little evidence is available, and what is available is

contradictory. For example, the poor dogfighting skills of Chinese pilots suggests that the problem was an inability to fully exploit modern technology.<sup>132</sup> On the other hand, the excellent machine gunning and artillery skills of Chinese ground forces indicate just the opposite, that the problem was simply the inadequacy of the available hardware.

As a final note, although China's enemies have often blamed their losses on Chinese numerical superiority in manpower, I find this excuse entirely unconvincing. In most of their wars, Chinese quantitative advantages were not great. In Korea, the Chinese often had fewer men in the field than the UN forces. Of course, the UN armies had a much lower "tooth-to-tail" ratio so the Chinese frequently had more combat soldiers available than did the US. But these imbalances should not have been decisive. For instance, in November 1950, China fielded 350,000 men against 450,000 UN soldiers. Even if one assumes that as much as 80 percent of Chinese manpower were combat troops while only 50 percent of UN manpower were, the net figure is 280,000 Chinese soldiers against 225,000 UN soldiers. Given the immense disparity in weaponry between the two sides, such a slight difference in manpower should have been irrelevant. Moreover, in Vietnam, the Vietnamese probably outnumbered the actual Chinese invasion force by a very narrow margin.

Regardless of the raw balance of manpower, the crucial point is that the Chinese did not win by overwhelming numbers. The Chinese were forced to employ mass as a substitute for firepower in their tactical maneuver schemes. This should not take away from the fact that their victories over the US-led armies in Korea, the Indians, and to a lesser extent over the Vietnamese, were achieved by superior tactical competence. The Chinese won their wars by winning battles and they won battles by deceiving, confusing, and outmaneuvering their opponents, not by drowning them in a sea of manpower. American military units in Korea were very mediocre, and weren't even as competent as their World War II antecedents.<sup>133</sup> For the Americans, having more such units would not have made nearly as much difference as having more capable units. This point is illustrated by the outcome of the fighting in Vietnam, where the odds were nearly even and what made the difference was Vietnamese tactical skill. Only because the Vietnamese were the equal of the Chinese in tactical skill did they win--the numerical balance did not matter.

### **Chinese Military Effectiveness vs. Arab Military Effectiveness**

The only areas of China's military performance that showed real similarities to that of the Arab armed forces in 1945-1991 lay in those categories related to technical skills and the handling and support of modern arms. Both the Chinese and the Arabs had difficulty assimilating new weaponry. Their troops were never able to get the maximum performance out of their equipment. Several Arab states tried, like the Chinese, to develop an extensive, modern arms industry and failed. Indeed, both the Iraqis and the Chinese enjoyed their greatest successes in the narrow areas of ballistic missiles and nuclear weapons development, and they did so only by committing their best scientists and lavish resources. Their broader efforts to develop and produce conventional arms

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<sup>132</sup> To make matters even more confusing, it is unclear why the Chinese fared so poorly in air-to-air combat. Chinese pilots may simply have been bad at air combat maneuvering. On the other hand, the problem may have been the newness of the Chinese Air Force and the inexperience of its pilots. This argument is supported by the fact that American pilots reported a steady improvement in Chinese dogfighting skills as the war progressed. Alternatively, the problem may have been that they were going up against the best air force in the world with the most experienced pilots and the best fighter planes. In other words, the Chinese might have been perfectly good dogfighters, but against the US Air Force and its F-86 Sabres, they looked bad. Of these three possible explanations, only the first supports the underdevelopment theory. Once again, we lack the evidence to decide among them.

<sup>133</sup> For American, British, Chinese, and North Korean assessments of the mediocre abilities of US units see, Blair, pp. 185-186; Spurr, pp. 15, 169-173; Whiting, p. 130.

were disappointing largely because, having skimmed off the cream for their nuclear and missile programs (and a few other small, high-priority projects, their scientific expertise and resources proved inadequate. Nevertheless, even in the technical realm there were areas of divergence between the Arabs and the Chinese. For instance, the Arabs did fairly well with logistics and the Chinese did not, while the Chinese were quite good with some of their weaponry, such as their artillery, while the Arabs were not.

With regard to some of the other predictions of the underdevelopment theory, the Arabs and Chinese showed little similarity. For example, the Chinese preferred to operate at a very rapid tempo, which the Arab armies found impossible. Arab tactical intelligence generally was neglected and distorted, whereas the Chinese were superb at tactical intelligence gathering and analysis. Finally, the Arabs were abysmal at combining their combat arms into integrated teams, but limited evidence suggests the Chinese did reasonably well with combined arms operations.

This lack of similarity was the rule for the Arabs and the Chinese. The combat performance of Chinese armies during the postwar era bore little resemblance to that of the Arab armies. Aside from those categories related to limited technical skills noted above, the only areas in which Chinese and Arab armed forces appeared comparable was in the high degrees of unit cohesion and personal bravery displayed by both. Other than this, it is difficult to find areas in which the Arabs fought as well as, or even just similar to, the Chinese. In particular, the Chinese manifested none of the problems the Arabs had with tactical leadership in terms of initiative, creativity, flexibility, responsiveness, etc. Indeed, these were the areas in which the Chinese excelled. Nor did the Chinese suffer from the kinds of information mismanagement problems that plagued the Arab militaries.

These results further strengthen the claims of the Arab-culture theory, but provide only limited support for the underdevelopment theory. Once again, they demonstrate that the underdevelopment theory cannot account for Arab problems with tactical or strategic leadership, and that only the Arab culture theory can. However, they do reinforce the notion that underdevelopment does play an important role in limiting the technical skills of the personnel available to an army.

### **Arab vs. Non-Arab Third World Armies: A Comparison**

In this chapter I discussed the military effectiveness of two underdeveloped, non-Arab states: Chad and China. In the previous two chapters I did the same for two other underdeveloped, non-Arab states: Argentina and Cuba. Because all four of these countries fit the criterion, I believe it worthwhile to compare all four of them with Arab military effectiveness to reinforce the strength of my conclusions. There are a great many nations in the world that are neither Arab nor industrialized but that have gone to war since 1945, and therefore the larger my sample size, the stronger my conclusions.

China, Chad, Cuba and Argentina were all pre-industrial, or perhaps "proto-industrial" societies during the periods considered in the last three chapters. Table 16b above provides a comparison of the socio-economic indicators for these four countries at the various times they were at war during the postwar period. In addition, it gives those same statistics for Sweden in 1960 and again in 1990. Sweden was already an industrial society in 1960 and this provides a baseline against which to measure the socio-economic development of the other four states. In addition, Table 16c above provides the same statistics for the five Arab states I examined in Part II of this study. A comparison of these tables demonstrates several things. First, all of the Arab states and all four of the non-Arab states I examined were underdeveloped societies. While the Arab states experienced considerable growth, as late as 1990 none had even come close to the level of Sweden in 1960, and therefore none could be considered advanced, or industrialized societies by any stretch of the imagination. Second, the same is true for Chad, China,

**Table 16b. Socio-Economic Development in Argentina, Chad, China, Cuba and Sweden at Various Times.**

Socio-Economic Indicators	Argentina 1980	Chad 1990	China 1950	China 1980	Cuba 1975	Cuba 1990	Sweden 1960	Sweden 1990
GNP per Capita (\$1990)	3,979	190	636	718	1978: 2,545	1,580	8,126	23,660
Literacy Rate (% of pop. over 15 able to read+write)	93	30	10	65	96	94	99	99
Infant mortality per 1,000 live births	44	122	NA	42	25	11	17	5
% of workforce in manufacturing	34	5	4	13	18	22	45	38
% of workforce in agriculture	13	85	77	75	26	20	14	3
Inhabitants per physician	530	30,030	13,341	1,200	NA	NA	730	370
Inhabitants per car	9	473	10,940	606	NA	45	7	2
Inhabitants per telephone	10	520	NA	NA	NA	18	3	1
Inhabitants per television	6	1,000	NA	11	NA	7	8	NA
Electricity production per capita, in Kwh	NA	15	8.4	274	1978: 876	707.8	4,964	16,700

**Table 16c. Socio-Economic Development of the Arab States, 1960 and 1990**

Socio-Economic Indicators	Egypt 1960	Iraq 1960	Jordan 1960	Saudi Arabia 1960	Syria 1960	Egypt 1990	Iraq 1990	Jordan 1990	Saudi Arabia 1990	Syria 1990
GDP per Capita (\$1990)	642	1,030	780	NA	853	720	1,940	1,100	5,800	2,300
Literacy Rate	26	15	32	3	36	48	60	80	62	64
Infant mortality per 1,000 live births	128	140	140	190	130	80	84	38	59	45
% of workforce in manufacturing	5	5	26	10	19	20	22	20	28	32
% of workforce in agriculture	58	53	44	72	54	34	30	20	16	32
Inhabitants per physician	2,500	4,900	5,900	13,000	5,200	1,320	1984: 1,740	770	700	1,160
Inhabitants per car	386	168	262	NA	273	54	27	21	12	109
Inhabitants per telephone	106	122	67	189	90	25	28	44	10	27
Inhabitants per television	520	189	825	923	NA	9	14	1980: 16	4	17
Electricity production per capita, in Kwh	102	132	59	72	77	820	430	1,150	3,300	680

Sources: Rafic Boustani and Philippe Fargues, *The Atlas of the Arab World*, 1990; CIA, *China: A Statistical Compendium*, 1979; CIA, *China: Economic Performance in 1987 and Outlook for 1988*; CIA, *The Cuban Economy: A Statistical Review*, 1981 and 1989; CIA, *World Factbook*, 1989-1995; Economic Research Centre, The People's Republic of China, *Almanac of China's Economy*, 1981; Carmelo Mesa-Lago, *The Economy of Socialist Cuba: A Two Decade Appraisal*, 1981; Barry Richman, *Industrial Society*

Cuba and Argentina. Third, although Argentina in 1980 and Cuba in 1975-1990 were more advanced than the Arab states even in 1990, this difference is not dramatic. Argentina and Cuba are much closer to the level of the Arab states than they are to Sweden even in 1960. Fourth, China in 1950 and Chad in 1990 were even more backward than the Arab states were in 1960.

Given these comparable levels of underdevelopment, the question then becomes, do we see similar patterns of military effectiveness among these nine countries--Argentina, Chad, China, Cuba and the five Arab states. The underdevelopment theory predicts that we should find strong similarities in the military performance of all Third World countries, regardless of other circumstances. The Arab culture theory predicts that while all of the Arab countries should demonstrate similar patterns of military effectiveness, there is no particular reason that these same patterns should resemble the proclivities of other, non-Arab militaries. As discussed in Chapter 11, the Arab states demonstrated a remarkable consistency in their patterns of military effectiveness both over time and from country to country. On the other hand, the examinations of the four non-Arab states in the last three chapters have made clear that there was little similarity between the patterns of Arab military effectiveness and those of Argentina, Chad, China and Cuba.

Most problematic for the underdevelopment theory is the fact that the four non-Arab states did not show the same patterns of difficulty in the areas of tactical leadership and information management that proved so debilitating to the Arab armies. The Argentines did reasonably well in terms of the aggressiveness, creativity, flexibility, and initiative shown by their junior officers, while Chinese, Chadian, and Cuban tactical commanders excelled in these areas. Similarly, none of these militaries suffered from the same problems of dissembling, obfuscation, and compartmentalization of information as the Arabs. As noted in Chapter 15, the Argentines had problems with information flows, but these were not the same as those of the Arabs, suggesting other factors were at work in the Arab cases. In fairness to the underdevelopment theory, it never claimed to be able to explain such problems (although some early modernization theorists suggested as much). However, the fact that these facets of tactical leadership and information management proved to be the most problematic for the Arabs but were not problems at all for the other four non-Arab states indicates that the underdevelopment theory is not the best explanation for Arab military ineffectiveness from 1945 to 1991.

The one real exception to this rule lay in the various categories of military performance related to technical skills. Although the specifics varied, all nine of these countries did demonstrate a considerable degree of difficulty in teaching their men to use advanced military equipment, employing such equipment to the full extent of its capabilities, repairing and maintaining the equipment, assimilating it into their force structure, and building an infrastructure capable of developing and producing such equipment on its own. The similarities both among the Arab states and between them and the non-Arab states in these categories strongly supports the contention of the underdevelopment theory that such problems derive from low-levels of socio-economic development. Since these problems were important elements of Arab military fortunes between 1945 and 1991, they argue that the underdevelopment theory can explain at least some aspects of Arab military ineffectiveness during this period.

On the other hand, similarities between the Arabs and the Argentines, Chadians, Chinese, and Cubans could not be found in other categories which the underdevelopment

**Table 16e. Predictions of the Underdevelopment Theory Compared to Chadian, Chinese, Cuban, Argentine and Arab Military Effectiveness 1945-1991.**

Category	Under-development Theory	Chadian Performance 1986-1987	Chinese Performance 1950-1979	Cuban Performance 1975-1988	Argentine Performance 1982	Arab Performance 1945-1991
Tactical creativity		Good	Good	Good	Adequate	Poor
Strategic creativity		Good	Good	Good	Poor	Uneven
Information flows		Good	Good	Good	Poor	Poor
Tactical initiative		Good	Good	Good	Good	Poor
Strategic initiative		Good	Good	Good	Poor	Uneven
Centralization/Delegation		Good	Good	Adequate	Poor	Poor
Simplicity of Chain of Command		Good	Good	Adequate	Poor	Uneven
Tactical use of maneuver		Good	Good	Good	Good	Poor
Strategic use of maneuver		Good	Good	Good	Poor	Uneven
Employment of armor	<b>Poor</b>	--	--	Adequate	--	<b>Poor</b>
Employment of artillery	<b>Poor</b>	--	Good	Adequate	Adequate	<b>Poor</b>
Air-to-air combat skills	<b>Poor</b>	--	Poor	Adequate	--	<b>Poor</b>
Air-to-ground operations	<b>Poor</b>	--	--	Adequate	Good	<b>Poor</b>
Ad hoc operations		Good	Good	Good	Uneven	Poor
Set-piece operations		Poor	Poor	Good	--	Adequate
Combined arms	<b>Poor</b>	Unclear	Adequate	Good	Adequate	<b>Poor</b>
Unit cohesion		Poor	Good	Adequate	Poor	Good
Personal Bravery		Adequate	Good	Adequate	Poor	Good
Maintenance and repair	<b>Poor</b>	<b>Poor</b>	--	Good	<b>Poor</b>	<b>Poor</b>
Assimilation of equipment	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	--	Adequate	<b>Poor</b>
Logistics	Poor	Poor	Poor	Good	Poor	Uneven
Combat engineers	Poor	--	Adequate	Good	--	Good
Technical support	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	--	Adequate	<b>Poor</b>
Tactical intelligence	Inadequate	Good	Good	Good	Good	Poor
Strategic intelligence		Good	Adequate	Good	Poor	Uneven
Operational Security		<i>Good</i>	<i>Good</i>	<i>Good</i>	Poor	<i>Good</i>
Tactical leadership		Good	Good	Good	Adequate	Poor
Strategic leadership		Good	Good	Good	Poor	Uneven
Ability to Plan and Execute Complex Operations	Poor	Adequate	Good	Good	Adequate	Uneven
Officer rotations		Fine	Fine	Unclear	Excessive	Unclear
Morale (at start of the war)		Good	Good	Uneven	Poor	Adequate
Attention to training		Poor	Good	Good	Poor	Uneven
Emphasis of training		Good	Good	--	Misguided	Adequate
Ability of soldiers to benefit from military training	<b>Poor</b>	<b>Poor</b>	<b>Poor</b>	--	--	<b>Poor</b>
Preferred operational tempo	<b>Slow</b>	Fast	Fast	Fast	Slow	<b>Slow</b>
Attention to offensive ops		Excessive	Good	Excessive	Adequate	Adequate
Attention to defensive ops		Inadequate	Good	Poor	Adequate	Adequate
Attention to air superiority		--	Good	Good	Adequate	Uneven
Unit/service coordination		--	--	Good	Poor	Poor
Willing to take casualties		Poor	High	--	Unclear	Low

A blank square indicates the underdevelopment theory does not necessarily make any prediction in this category.

A double dash (--) indicates that inadequate information was available to make a judgment in this category.

Results in **bold** indicate categories in which Arab military effectiveness conformed to the predictions of the underdevelopment theory, at least superficially. Results in *italics* indicate categories in which Arab military effectiveness conformed to that of two or more of the non-Arab militaries, at least superficially. The underdevelopment

theory predicts that both Arab military performance and non-Arab Third World military performance should conform to the patterns predicted by the theory. In other words, it predicts that there should be many lines on this chart where the results are in both italics and bold.

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theory predicts should have been problematic. The Arabs suffered from poor armor, artillery and air operations, combined arms, and tactical intelligence, as well as being unable to handle a quick pace of operations. All of these problems conform to the predictions of the underdevelopment theory. However, Argentina, Chad, China and Cuba generally did not experience problems in these areas, and to the extent that they did, they were not nearly of the same magnitude as the Arabs. These results suggest that the underdevelopment theory itself may be incorrect in positing that these problems are somehow related to underdevelopment.

### **Additional Evidence from Other Non-Arab Cases**

Of course, there is an alternative explanation to all of the above. Four non-Arab cases is a small sample given just how many Third World states have gone to war since 1945. Thus, it may be that Argentina, Chad, China, and Cuba were exceptions to an otherwise iron-clad rule that indicates that Arab military performance was characteristic of all underdeveloped societies.

In truth, this seems unlikely. My fairly detailed explorations of the Argentine, Chadian, Chinese, and Cuban cases makes it clear that at a superficial level they bore little resemblance to the Arabs, and that the deeper one digs in attempting to understand the patterns of their military effectiveness, the less they look like the Arab armed forces. It is highly unlikely that if there were a "Third World Way of War" as suggested by the underdevelopment theory, that these four countries would not bear at least traces of that pattern. Yet they do not. Only in those areas of military effectiveness related to technical skills was there a significant similarity. Moreover, it would be reasonable to expect that if these four countries were somehow exceptional, they would not differ so strongly in most categories. That is, it would be one thing if these non-Arab states performed adequately in military operations the Arabs handled poorly, but in most cases they did extremely well in those areas in which the Arabs did extremely poorly. This suggests that it is not simply a matter of incidental differences covering over a deeper pattern of commonality. It suggests instead that there simply is no pattern.

Nevertheless, to demonstrate that it is not the case that Argentina, Chad, China, and Cuba are somehow exceptions to an otherwise inviolate rule, it is useful to expand the sample. In researching this study, I had reason to look into the military experiences of a number of other non-Arab Third World states because they fought against or alongside one of the Arab or non-Arab states I examined in my case studies. Thus I looked at the military performance of North and South Korean forces while examining the Chinese experience in the Korean War. I had to gauge Iranian military effectiveness to be able to properly measure Iraqi performance during the Iran-Iraq War. Vietnam and India fought against China at different times, just as Somalia and Angola's UNITA fought against Cuba. Similarly, both Ethiopia and the Angolan FAPLA fought alongside the Cubans.<sup>134</sup>

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<sup>134</sup> Although at a superficial level Israel qualified as a Third World state at times during the postwar period, I believe this is misleading and so have not included Israel in this sample. In the 1940s and 1950s, many economic indicators for Israel would have made the Jewish state seem comparable to many of the countries I examined for this study. However, it must be remembered that the Israeli population at that time included a very heavy proportion of European Jews who had grown up in industrial societies and therefore could be expected to have internalized the behavior and thought-processes of the industrial world.



None of these nine other militaries displayed patterns of military effectiveness identical, or even generally similar, to the Arab militaries. Indeed, it was very difficult to find common patterns among them at all. Some states did some things well, other states did entirely different things well. There were areas of overlap in which two or three states all did the same thing well--or all did the same thing poorly--but in none of these categories did the pattern extend to all, or even most, of the entire sample. For example, the Somali army, like the Chadian FANT, was very good in unstructured maneuver battles, but very poor when conducting static defensive operations.<sup>135</sup> On the other hand, the South Koreans, like the Argentines, suffered principally from inadequate training for their enlisted personnel and poor senior leadership.<sup>136</sup>

Once again, the one exception to that rule occurred in those areas of military performance related to weapons handling and support. To a greater or lesser extent, all of the Third World militaries experienced some degree of difficulty in assimilating sophisticated military technology into their force structure, employing it to its fullest potential in battle, maintaining it and keeping it supplied, developing it and manufacturing it. To a lesser extent, many of these states also experienced problems with air-to-air and air-to-ground operations, artillery and armor operations, combined arms integration, and difficulty operating at a rapid operational tempo. However, there was considerable variance from country to country in the degree and the areas of these difficulties. For example, the Indians had tremendous logistical difficulties but were reasonably good at maintenance.<sup>137</sup> On the other hand, Vietnam had difficulties with combined arms operations, but had superb combat engineers.<sup>138</sup> To better illustrate some of these differences, it is worth providing a very brief summary of the performances of three of these armed forces: Iran, Angola (FAPLA), and North Korea.

### *Iran, 1980-1988*

Throughout the Iran-Iraq war, the Iranian armed forces were generally quite mediocre overall, but also were clearly better than their Iraqi opponents.<sup>139</sup> Despite the

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Consequently, Israel would not constitute a fair case with which to test the underdevelopment theory.

Similarly, the World Bank and United Nations rank South Africa at the same level of socio-economic development as Argentina. However, I believe this too is deceptive. South Africa's socio-economic rank is derived largely by lumping South Africa's white population together with its black population. South Africa's white population has long constituted an advanced, industrial society in the midst of a poor sub-Saharan African society. Moreover, South Africa's army was largely drawn from its white population, and consequently, it would be misleading to claim that the soldiers in the South Africa Defense Forces came from a society on a par with Argentina in terms of socio-economic development.

<sup>135</sup> Somalia's Soviet advisers reached the same conclusions in the early 1970s and so structured the Somali armed forces entirely for mobile light-armored warfare. See, William H. Lewis, "Ethiopia-Somalia (1977-1978)," in Robert Harkavy and Stephanie Neuman, *The Lessons of Recent Wars in the Third World, Vol. 1*, (Lexington, Mass: Lexington Books, 1986), esp. p. 114.

<sup>136</sup> On South Korean military effectiveness see in particular Lt. Colonel Roy Appleman, *Disaster in Korea: The Chinese Confront MacArthur*, Op. cit.; Clay Blair, *The Forgotten War*; Edwin Hoyt, *The Day the Chinese Attacked: Korea, 1950*, Op. cit.; General Paik Sun Yup, *From Pusan to Panmunjom*, Op. cit.; and General Matthew Ridgway, *The Korean War*, Op. cit.

<sup>137</sup> On Indian military effectiveness, see Stephen P. Cohen, *The Indian Army*, (New Delhi: Oxford University Press, 1990); Johri, *Chinese Invasion of NEFA*, Op. cit.; Lorne J. Kavic, *India's Quest for Security: Defense Policies 1947-1965*, (Berkeley: University of California Press, 1967); author's interviews with US military personnel, September 1993.

<sup>138</sup> On North Vietnamese military effectiveness, see Dale Andrade, *Trial by Fire: The 1972 Easter Offensive, America's Last Vietnam Battle*, (NY: Hippocrene, 1995); Stanley Karnow, *Vietnam: A History*, Paperback Edition, (NY: Penguin, 1991); Michael Lee Lanning and Dan Cragg, *Inside the VC and the NVA*, (NY: Fawcett Columbine Books, 1992); Pike, *PAVN: People's Army of Vietnam*, Op. Cit.: General William Westmoreland, *A Soldier Reports*, Paperback Edition, (NY: Da Capo, 1989).

<sup>139</sup> On Iranian military effectiveness during the Iran-Iraq War, see Maj. Ronald Bergquist, *The Role of*

*mullahs'* fears, the Iranian military employed a fairly decentralized command structure that placed a considerable amount of the decision-making burden on the shoulders of battlefield commanders. More often than not, Iranian commanders at both strategic and tactical levels rose to the occasion, recognizing opportunities in battle and moving to take advantage of them. Iran's armed forces also showed a fair degree of flexibility and creativity in all areas of military operations. Iranian commanders never ceased to come up with novel (albeit not always practical) solutions to military problems. Similarly, the Iranians consistently demonstrated their superiority over their Iraqi counterparts in air-to-air combat, tank duels, and helicopter operations. The Iranians were far more diligent both about reconnaissance and CC&D and they consistently took the Iraqis by surprise. Unit cohesion, combat engineering, and personal bravery were also areas of real Iranian strength.

In some ways, Iran's military performance against Iraq was similar to that of the Chinese armed forces against the UN in Korea. The Iranians were not nearly as good as the Chinese at tactical operations, but they were better than the Iraqis. Until the Iraqi General Staff took complete control of Iraqi operations in 1987-1988, it was far more likely that Iranian formations would surprise, outflank and envelop Iraqi forces than vice versa. In particular, the Iranian offensives that drove the Iraqis out of Iran in 1981, showed an excellent understanding of the need for maneuver, rapid exploitation of breakthroughs, and encirclement. However, like the Chinese, the Iranians were badly hamstrung by their miserable logistics system, their crippling dearth of mobility assets, and their lack of firepower. Of course, these three categories were Iraq's strong suits. Iranian maintenance practices also were atrocious. In addition, the Iranians suffered from the *mullahs'* penchant for human wave attacks. The *mullahs* believed that religious fervor, not military skill would ultimately prevail. As a result, they relied heavily on masses of untrained manpower for their assaults and prevented the Iranian Army from training a body of professional soldiers able to do more than simply run into battle with rifles they did not know how to use and screaming "Allahu 'Akbar!"

#### *The Angolan FAPLA, 1987-1988*

The People's Armed Forces of Angola (FAPLA, in Portuguese) was a pretty poor army, but was not wholly without redeeming features.<sup>140</sup> FAPLA's greatest problems

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*Airpower in the Iran-Iraq War*, (Maxwell Air Force Base, Alabama: Air University Press, 1988); John Bulloch and Harvey Morris, *The Gulf War*, (London: Methuen, 1989); Anthony Cordesman and Abraham Wagner, *The Lessons of Modern War, Volume II: The Iran-Iraq War*, (Boulder, CO: Westview, 1990); Dilip Hiro, *The Longest War: The Iran-Iraq Military Conflict*, (NY: Routledge, 1991); Kenneth Katzman, *The Warriors of Islam: Iran's Revolutionary Guard*, (Boulder, Colo: Westview, 1993); Stephen C. Pelletiere, *The Iran-Iraq War: Chaos in a Vacuum*, (NY: Praeger, 1992); William O. Staudenmaier, *A Strategic Analysis of the Gulf War*, (Carlisle Barracks, PA: Strategic Studies Institute, US Army War College, Jan. 1982); William Staudenmaier, "Iran-Iraq, (1980- )," in Robert Harkavy and Stephanie Neuman, *The Lessons of Recent Wars in the Third World, Volume I*, (Lexington, MA: Lexington Books, 1986); John S. Wagner, "Iraq," in Richard Gabriel ed., *Fighting Armies: Antagonists in the Middle East*, (Westport, CT: Greenwood Press, 1983); Sepehr Zabhi, *The Iranian Military in Revolution and War*, (London: Routledge, 1988).

<sup>140</sup> On FAPLA military effectiveness in the 1980s, see Ian Greig, *The Communist Challenge to Africa: An Analysis of Contemporary Soviet, Chinese and Cuban Policies*, (Surrey, UK: Foreign Affairs Publishing Co. Ltd., 1977); Helmoed-Römer Heitman, *War in Angola: The Final South African Phase*, (Gibraltar: Ashanti Publishing Ltd., 1990); IISS, *Strategic Survey*, for 1986-1988, (London: IISS, various); W. Martin James III, *A Political History of the Civil War in Angola, 1974-1990*, (New Brunswick, NJ: Transaction, 1992); Colin Legum ed., *Africa Contemporary Record*, for 1986-1988, (NY: Africana Publishing Co., various); Olga Nazario, "Cuba's Angola Operation," in Sergio Díaz-Briquets, ed. *Cuban Internationalism in Sub-Saharan Africa*, (Pittsburgh, Pa: Duquesne University Press, 1989); Daniel S. Papp, "The Angolan Civil War and Namibia: The Role of External Intervention," in David R. Smock ed., *Making War and Waging Peace: Foreign Intervention in Africa*, (Washington, DC: United States Institute of Peace Press,

were poor morale, low levels of personal bravery and abysmal unit cohesion. Because of these difficulties, FAPLA units regularly disintegrated in combat with much smaller South African units long before the battle had been decided. Although at times FAPLA units could move quickly, they preferred a slow pace of operations and usually were completely befuddled by the rapid tempo set by their South African opponents. FAPLA had great difficulty coordinating its operations and orchestrating the movements of geographically distant units for large-scale operations. FAPLA soldiers handled their weaponry extremely poorly which was an important problem given that their equipment was inferior to that of South Africa to begin with. FAPLA artillery and armor operations were poor, as were its air-to-ground missions. Although FAPLA commanders were diligent about sending out patrols, their soldiers were not very diligent about patrolling. Likewise, FAPLA was very negligent when it came to CC&D and operational security.

Nevertheless, FAPLA was not completely incompetent. Its combined arms operations were uneven with some units showing a very good understanding of the need to integrate the different combat arms, and others showing none whatsoever. FAPLA tactical commanders were reasonably flexible and aggressive, and fairly willing to take independent action or improvise responses to battlefield developments. At times, FAPLA commanders showed a real flare for maneuver. Some FAPLA officers tried to mount counterattacks in different situations, but like their Argentine counterparts, could not stop their fleeing troops to make such an effort. Moreover, like the Arab armies, FAPLA forces did well when conducting set-piece offensives, such as at the start of their various drives to the Lomba river, but these usually fell apart as soon as the South Africans outflanked them and shattered their fragile morale.

#### *North Korea, 1950-1953*

The North Korean People's Army (NKPA) performed quite well in its invasion of South Korea, and even in subsequent military operations after the US landing at Inchon had reversed their initial gains.<sup>141</sup> North Korean generals were good, although they made several crucial mistakes that probably meant the difference between victory and defeat. In particular, General Kim's decision to try to outflank the US and ROK forces as they fell back to the Pusan perimeter rather than simply drive straight at the UN lines almost certainly was a fatal error.

Like the Chinese, North Korean forces were outstanding in terms of their tactical competence. North Korean tactical commanders were extremely aggressive and willing to act independent of higher authority. As a result they rarely missed an opportunity to exploit a mistake by their opponent. They were highly creative and regularly improvised new approaches to battlefield problems. They were flexible and responded well to the vicissitudes of combat. They maneuvered constantly, to the point that US units essentially expected to be outflanked in combat with the NKPA. They kept up a very quick pace of operations and tried hard not to give a beaten enemy any time to regroup and reform his lines. They patrolled aggressively and regularly, seeking out unit boundaries in particular, and their operational security and CC&D were also very good, albeit perhaps not quite so good as the Chinese. In the words of one American officer surprised by North Korean prowess, "Instead of charging wildly into battle, they employed a base of fire, double envelopment, fire blocks on withdrawal routes, and skilled infiltrations."<sup>142</sup> On the defensive, North Korean forces were very active, luring UN forces into fire sacks,

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1993); Keith Somerville, *Foreign Military Intervention in Africa*, Op. cit.; Daniel Spikes, *Angola and the Politics of Intervention*, (Jefferson, NC: McFarland and Co. Inc, Publishers, 1993).

<sup>141</sup> On North Korean military effectiveness, see Clay Blair, *The Forgotten War*, Op. Cit., esp. pp. 102-369; Samuel B. Griffith II, *The Chinese People's Liberation Army*, Op. cit.; General Paik Sun Yup, *From Pusan to Panmunjom*, Op. cit.; General Matthew Ridgway, *The Korean War*, Op. cit; Russell Spurr, *Enter the Dragon: China's Undeclared War Against the US in Korea 1950-1951*, Op. cit.

<sup>142</sup> Blair, p. 102.

counterattacking aggressively, shifting reserves quickly to meet each new UN thrust, and suddenly sweeping around the UN's flank to try to cut-off a penetration at the shoulder.

The North Koreans also were quite good at armored operations. They handled their tanks adequately--not great--but they were very good at concentrating armor to break through a defensive sector then sending the armored formations ahead at top speed to overrun rear areas and envelop frontline forces, while infantry formations were left to actually reduce the trapped enemy pockets. Moreover, these operations demonstrated a very high degree of combined arms cooperation. NKPA tanks, infantry, artillery, and engineers worked very well together, with each arm aiding and covering the vulnerabilities of the other.<sup>143</sup>

North Korea's defeat in 1950 had little to do with its own military effectiveness. There were really only two areas in which the North Koreans contributed to their own defeat: logistics and air defenses. The North Koreans had a tiny air force and meager amounts of ground-based air defenses, with the result that the US quickly established air superiority and began hammering their supply lines. It is unclear just how deficient North Korean logistics would have been absent US air attacks, but in the face of the US air effort, the North Korean logistics system slowly crumbled such that during the decisive battles around the Pusan perimeter, NKPA tanks literally began running out of gas in the midst of combat.<sup>144</sup> The other reasons for North Korea's defeat were unrelated to NKPA combat effectiveness and include: 1) Kim's strategic blunder choosing to flank the UN forces rather than simply pushing them into the sea, 2) the tremendous increase in US military strength and firepower on the peninsula, 3) severe losses among North Korea's veteran soldiers and their replacement with raw recruits, and 4) the intelligence *coup* of the war, as US intelligence broke several of North Korea's most important military codes and so gained advance knowledge of NKPA operations.<sup>145</sup> Indeed, the US finally broke through the NKPA lines around Pusan only by using its intelligence advantage to find out where the North Koreans intended to attack and then concentrating enormous firepower in that sector to annihilate the NKPA assault force. In this way, the US gradually wore down NKPA combat strength to the point where the North Koreans lacked the forces to maintain a contiguous line opposite the Americans. Otherwise, the North Koreans ran circles around the US forces in battle. Indeed, in September 1950, the US Eighth Army at Pusan had 225,000 men and over 500 tanks but still had tremendous difficulty breaking through the North Korean lines, even though the NKPA had been reduced to 70,000 men (only 20,000 of whom were veterans) with only about 40 operational tanks.<sup>146</sup>

### *Conclusions from the non-Arab Cases*

These cases make two things clear. First, the only area of general similarity in patterns of military effectiveness among Third World states lay in the realm of technical skills. Moreover, there was a good deal of variance in the degree and extent of these

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<sup>143</sup> The NKPA had a large cadre of Soviet advisers and a fair number of North Koreans had been trained in military operations in Russia after World War II. Although North Korea had no Chinese advisers nor any real military-to-military contact with the Chinese, roughly one-third of NKPA personnel had fought on the side of the Communists during the Chinese Civil War. As a result, the North Koreans seem to have picked up the best of both of their mentors: they were very adept at CC&D, surprise attacks, infiltration, and tactical maneuver, like the Chinese, but were also good at fast-paced armored operations featuring deep penetrations, bypassing resistance, and wide encirclements. Why North Korea inherited all of the best traits and few of the worst traits of its mentors is a very interesting question which unfortunately remains a mystery. See Griffith, p. 113; Spurr, pp. 13-14, 17-18.

<sup>144</sup> Paik, p. 49.

<sup>145</sup> This list of factors leading to North Korean defeat relies heavily on Blair, pp. 169-172; and Spurr, pp. 20-2, 61-68.

<sup>146</sup> Blair, pp. 169-172, 214, 221-239, 281-295.

patterns, suggesting that other factors in addition to underdevelopment were at work. Second, the patterns of behavior most harmful to Arab military operations, those related to tactical leadership and information management, were not common to the rest of the Third World.

### Conclusions

The results of this competitive test strongly reinforce the findings from the competitive test performed in Chapter 11. The predictions of the Arab-culture theory were fulfilled to a greater extent than were those of the underdevelopment theory, although the underdevelopment theory was not disconfirmed and, in fact, performed fairly well. If underdevelopment had been the primary cause of Arab military ineffectiveness from 1945 to 1991 there should have been an improvement in Jordanian military performance during the postwar period as Jordan experienced a significant improvement in its level of socio-economic development, but general patterns of Arab military effectiveness should have conformed closely to those of other non-Arab Third World armed forces. Likewise, there should have been an improvement in Egyptian, Iraqi, and Syrian military effectiveness when they filled their ranks with college graduates and technically-trained personnel. By contrast, the Arab-culture theory maintained that Jordanian military effectiveness should have remained constant--or declined given the loss of those features (the British military presence, heavy Bedouin recruiting) that isolated the Jordanian military from Jordanian society as discussed in Chapter 13--as should Egyptian, Iraqi, and Syrian military effectiveness, while Arab military effectiveness should have differed considerably from the experiences of non-Arab Third World states.

The first part of this test demonstrated that despite a fairly significant increase in Jordanian socio-economic status, Jordanian military effectiveness remained roughly unchanged and, to the extent that it changed at all, probably declined. Moreover, the examples of Egypt, Iraq, and Syria--all of which greatly inflated the numbers of college graduates and engineers in their armed forces but achieved no corresponding improvement in military effectiveness--further demonstrate that improving the socio-economic level of Arab military personnel had little effect on Arab military effectiveness generally, and had no effect on the debilitating problems of poor Arab tactical leadership and information management. Similarly, the second part of this test showed that, with the exception of those aspects of military operations related to machinery and technology, there was little similarity between the patterns of military effectiveness characteristic of Arab armed forces from 1945 to 1991, and the combat performance of other Third World militaries.

Thus, both parts of the test conformed more closely to the predictions of the Arab-culture theory than to those of the underdevelopment theory. The Jordanian case and the Egyptian/Iraqi/Syrian experiences demonstrated that military effectiveness remained essentially constant when culture was held constant and socio-economic level was varied. To the extent there was any variance in Jordanian military effectiveness, it occurred in the direction predicted by the Arab-culture theory, and not in the direction predicted by the underdevelopment theory. The various non-Arab cases demonstrated that military effectiveness varied markedly when culture was allowed to vary but socio-economic level was held constant.<sup>147</sup> Moreover, these results held constant no matter how much the

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<sup>147</sup> The fact that there was so little similarity between patterns of military effectiveness of the various underdeveloped states, Arab and non-Arab alike, casts doubt on the central presumption of the underdevelopment theory that there is a Third World "Way of War," common to all underdeveloped societies. Second, the fact that many of the underdeveloped states including Chad, China, Cuba, North

sample of non-Arab states was expanded.

Still one cannot discount the importance of the one area of exception revealed by this test. Machinery and technology play an important role in modern warfare and an inability to employ and support the machines of war constitutes a serious problem for any army. Moreover, the competitive tests in Chapter 11 revealed that various problems derived from limited technical abilities were probably the second most important cause of the Arabs' poor record in modern combat. This indicates that the underdevelopment theory does offer a valid explanation for at least one important aspect of Arab military ineffectiveness. Even in this area, Arab culture also appears to play a role. There was considerable variance in the scope and degree of these problems from country to country, and in many cases the Arab states appeared to suffer from these disabilities more than even poorer states, such as Chad. For example, the Chadians recognized the need for regular maintenance and tried to do it, but just didn't know what they were doing. The Arabs on the other hand generally failed to recognize the need for regular maintenance or else did not want to perform it because of the social stigma they attached to manual labor.

### **Maneuver Warfare and Mechanized Warfare**

To better understand the interrelationship of culture and underdevelopment on Arab military effectiveness, I believe it useful to distinguish between "maneuver warfare" and "mechanized warfare." Unfortunately, these terms are often used synonymously. Here, I will use them to refer to two different (although not opposite) concepts.

Maneuver warfare, as I define it, is an approach to military operations in which a general attempts to defeat his opponent by placing his forces in an advantageous position relative to his enemy's forces.<sup>148</sup> Another way to think about maneuver warfare is that it is an effort to create circumstances in which your own strengths are brought to bear against your enemy's weaknesses, producing the most favorable combat situations for your army. Creating these favorable combat situations is usually accomplished by movement: you move your forces so that you can attack your opponent from the flank or the rear, you move your forces so that they are on good terrain or so that your enemy moves into bad terrain. You move your forces in such a way that you exhaust your adversary, demoralize him, cut his supply lines, or force him to give up something of critical value--such as a national capital. Another method of creating the desired favorable circumstances is by taking some action (or series of actions) faster or sooner than your adversary.

Subterfuge and superior information are important elements of maneuver warfare because all maneuvering is movement relative to the enemy. It is not enough for you to move only your own forces: a successful maneuver must also cause the enemy to move (or simply remain still) in a way complimentary to your own movement. Thus, a crucial aspect of maneuver warfare is having full information about your own and your enemy's capabilities, intentions, and disposition while preventing him from gaining the same about your own forces. Better still is to be able to control the information reaching your adversary so as to mislead him. Only in this way is your adversary likely to move (or not

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Korea, Somalia, and North Vietnam, had superb leadership at tactical levels and few of the others suffered from the tactical problems experienced by the Arabs to the same extent as the Arabs, further undermines any reason to believe that poor Arab tactical leadership can be blamed on underdevelopment. This conclusion is a further knock against those scholars who have asserted that behavioral patterns such as independent initiative and improvisation among subordinates are somehow the product of industrialization. The Chadians were about as far from an industrialized society as conceivable, yet their soldiers and junior officers showed tremendous initiative, improvisation, and independent action on a constant basis. This supports the contention that these behavioral patterns derive from a community's culture, not its level of socio-economic development.

<sup>148</sup> My thinking on maneuver warfare was aided in part by the various essays in Richard D. Hooker, Jr. ed., *Maneuver Warfare: An Anthology*, (Novato, Ca: Presidio, 1993).

move) in the optimal manner for your own forces to gain the upper hand over his.

Mechanized warfare, on the other hand, refers to war with machines. Mechanized armies rely on complex mechanical objects--machines--for firepower, mobility, communications, information, and virtually everything else a soldier or general might require. In a mechanized army, it is the machines that are the crucial element of the army's combat power. Thus mechanized warfare refers to the use of war machines to secure an army's objectives. In an absolute sense, mechanized warfare might mean fighting with *any* mechanical implements, but a more useful definition would focus on the employment of large complex machinery such as tanks, aircraft, armored personnel carriers, radars, guided missiles, and the like. The European armies of the late 19th Century generally still belonged to the pre-mechanized category. World War I witnessed the birth of mechanized warfare, and the Allied armies at the end of the war could probably be considered "proto-mechanized" forces. In World War II, especially by the end of the war, all of the major powers fielded full-blown mechanized armies.

Maneuver warfare and mechanized warfare are not opposites. The opposite of maneuver warfare is attrition warfare, while the opposite of mechanized warfare is non-mechanized warfare.<sup>149</sup> Attrition warfare attempts to defeat an opponent largely through the application of mass. Mass may refer to manpower, to firepower, to fortification, or to anything else that one may use to defeat the enemy by matching strength against strength and simply overpowering the enemy in a straight-up test of power. Non-mechanized warfare, simply means fighting without machinery. Mankind managed to fight wars very well for thousands of years before the first mechanical devices. Moreover, sticking with the more useful definition of mechanized vs. non-mechanized warfare, I consider non-mechanized warfare to have been the rule up to the end of the First World War when tanks, airplanes, and other complex war machines began to dominate European armies.

Because maneuver warfare and mechanized warfare are not opposites, it is entirely possible for an army to employ both maneuver warfare and mechanized warfare simultaneously. Indeed, the best armies of the twentieth century did just that. The Germans (and Russians) in World War II, the Israelis beginning in the 1950s, perhaps even the Americans after Vietnam, did well both in maneuver warfare and in mechanized warfare, and this was often the key to their success. By the same token, it is also possible for an army to be heavily mechanized but fail to properly employ maneuver warfare. This is a common criticism leveled against the US military from World War I at least until Vietnam. Critics contend that the US armed forces sought to defeat their opponents by an overwhelming application of firepower against the enemy's strength. It often was referred to as "industrial" warfare because the US seemed to view the key to victory as being able to produce more war machines than the enemy could kill while killing more of the enemy's war machines than his factories could produce. Indeed, American military operations in both World War II and Korea, with a few notable exceptions, demonstrated a propensity to simply try to wear down an adversary through constant pressure from superior firepower and masses of machinery.<sup>150</sup>

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<sup>149</sup> Ultimately, the conception of maneuver warfare vs. attrition warfare goes back to the great German military historian Hans Delbrück, who distinguished between strategies of attrition and strategies of annihilation. Unfortunately, Delbrück's term "strategy of attrition" actually is much closer to what contemporary military theorists consider "maneuver warfare," while his "strategies of annihilation" correspond to the contemporary notion of "attrition warfare." Indeed, Delbrück uses the terms "maneuver strategy" and "attrition strategy" interchangeably. I have chosen to employ the contemporary terminology as more accurately reflecting the concepts they seek to capture. See Hans Delbrück, *History of the Art of War, Volume IV: The Dawn of Modern Warfare*, Translated by Walter Renfroe, Jr., Paperback edition, (Lincoln, Neb: University of Nebraska Press, 1985), pp. 108-112, 293-315.

<sup>150</sup> On American strategic tendencies, see in particular, Andrew F. Krepinevich, Jr., *The Army and Vietnam*, (Baltimore, Md: The Johns Hopkins University Press, 1986); and Russell F. Weigley, *The American Way of War*, (Bloomington, Ind: Indiana University Press, 1973).

It is also possible for an army to do well in maneuver warfare yet be non-mechanized. The Germans at the end of the First World War developed a brilliant method of maneuver warfare yet were not much more heavily mechanized than at the beginning of the war. The Israelis also did quite well in 1948--especially toward the end of the war--when their ramshackle army was far from mechanized. As revealed in this study, the Chinese in Korea and the Chadians against Libya also were superb at maneuver warfare, yet were not mechanized armies.<sup>151</sup>

In the twentieth century, it was always the case that it was better to employ a maneuver strategy, when possible, than an attrition strategy. This is not to say that maneuver strategies always prevailed over attrition strategies. The history of modern warfare is replete with examples of armies employing attrition strategies to defeat other armies employing maneuver strategies. The American defeat of Germany in World War II is a classic example of such a case. Obviously, the ability of each side to properly execute their chosen strategies and the ability of each side to generate the adequate military power to implement those strategies were usually the decisive factors rather than the strategies themselves. Nevertheless, given the state of warfare in the twentieth century, maneuver warfare was a more efficient method of attaining military objectives than was attrition warfare, and all other things (resources, military effectiveness, diplomacy, etc.) being equal, a good maneuver strategy would likely prevail over a good attrition strategy.<sup>152</sup>

Likewise, after 1918, it was always better to have a mechanized army than a non-mechanized army. Once again, this does not mean that mechanized armies always prevailed over non-mechanized ones. The Italian experience in Abyssinia in the 1930s springs to mind as an often-cited example of a primitive army routing a mechanized force. It merely means that mechanization carried an inherent advantage over the older forms of war. Once again, all other things being equal, a mechanized army would likely prevail over a non-mechanized army.

One last point to make about both maneuver warfare and mechanized warfare is that both can be practiced both well and poorly. There have been plenty of armies that attempted to outmaneuver their opponents only to fail. Similarly, there are many armies that have a great many tanks, fighter planes, surface-to-air missiles, and the like but are unable to employ or support them properly. How well an army conducts maneuver warfare or mechanized warfare is a measure of its military effectiveness. Indeed, attaching the adverbs "well" and "poorly" to any of these terms indicates that the military's competence in making war is being described in addition to the manner in which it makes war.

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<sup>151</sup> Many military practitioners and theorists argue that maneuver warfare, and the dichotomy between maneuver warfare and attrition warfare has existed since the beginnings of war itself. They see in the campaigns of Alexander, Hannibal, Caesar, Belisarius, Marlborough, Frederick the Great, Napoleon, and countless other great captains the same basic principles of maneuver warfare at work as in the German blitzkriegs and the Israeli offensives of 1967. Others disagree, and see these earlier campaigns as, at most, antecedents of maneuver warfare which is an inherently modern concept. While I agree with those in the first camp, and this interpretation means that countless successful armies over the thousands of years of recorded human history before industrialization stand as examples of non-mechanized armies able to successfully employ maneuver warfare, neither this debate nor these examples are critical to my study. Thus to avoid becoming bogged down in a debate that ultimately is irrelevant to my inquiry, I have chosen to accept the narrower definition and consider maneuver warfare to only be a modern concept. For a sampling of the debate regarding the timelessness of maneuver warfare compare B.H. Liddell Hart, *Strategy*, (London: Faber and Faber Ltd., 1954 and 1967); and William S. Lind, "The Theory and Practice of Maneuver Warfare," in Hooker, ed. *Maneuver Warfare: An Anthology*, Op. Cit.

<sup>152</sup> John Mearsheimer has made a similar point in his work on conventional deterrence, noting that countries are more likely to go to war when they can believe they can employ a successful maneuver warfare strategy rather than having to rely on attrition warfare. See John Mearsheimer, *Conventional Deterrence*, (Ithaca, NY: Cornell University Press, 1983).



Although there is some overlap, in general, different skills are required for successful maneuver warfare than for successful mechanized warfare. On the modern battlefield, successful maneuver warfare requires a decentralized command structure, flexible forces capable of acting quickly and taking advantage of fleeting opportunities, and a constant flow of accurate information on friendly and enemy forces up, down and across the command structure to ensure that every commander has the information he needs when he needs it. As these requirements make clear, effective maneuver warfare on the modern battlefield places tremendous demands on the junior officers of an army. Tactical commanders must be aggressive, independent, creative, flexible, and "communicative."<sup>153</sup>

Mechanized warfare requires a different set of skills. The first and most important is that soldiers and officers must understand complex machinery. They must understand how it operates well enough to be able to take advantage of the capabilities of the machines and the things that they make possible. Similarly, the soldiers and officers must understand the requirements of that machinery in terms of maintenance, repair, and consumption of fuel, lubricants, information, etc., to make it run and to keep it running over the course of battles and campaigns. Soldiers and officers in mechanized armies also must understand how complex machines interact, and how men can best interact with these machines to maximize the performance of both.<sup>154</sup>

### **Mechanized Warfare and Arab Warfare**

Essentially, the underdevelopment theory argues that individuals from pre-industrial societies will have difficulty waging mechanized warfare effectively because they will be unfamiliar with machines. They will be unable to use those machines to their fullest capabilities, they will not understand how to properly support those machines, and they will not have a very good understanding of how those machines interact with one another and with human beings. Consequently, the theory predicts poor weapons handling (especially for complex weapons systems such as tanks and jet fighters), poor maintenance and repair, poor logistics, poor engineering, poor technical support, poor combined arms operations, and a pace of operations and intelligence gathering that are not properly geared to the requirements and capabilities of machinery.

The various cases examined in Part II (and the Libyans examined in Part III) indicated that Arab militaries had real difficulties in all of these areas. The Jordanian case presented in this chapter demonstrated that only these aspects of military performance improved as Jordan's level of socio-economic development improved. Moreover, in all of the non-Arab cases presented in the last three chapters only in these areas did all of the armed forces experience problems similar to those of the Arabs. This evidence strongly indicates that underdevelopment is a serious impediment to the ability of any nation to conduct mechanized warfare.

Nevertheless, underdevelopment was not the only factor hindering the Arabs from conducting effective mechanized warfare. The Arab-culture theory predicts the same problems in these same areas of military effectiveness. The examinations of the various Arab militaries revealed that not all of the problems in these areas related to machinery were derived from simple underdevelopment. There was ample evidence that many of the problems were related to the stigma attached to manual labor. In many cases, the problem was not always that Arab personnel did not know how to do something, but that they simply did not want to do it. Similarly, the evidence indicated that many Arab problems with combined arms operations were derived from cognitive patterns fostered by the dominant culture because Arab personnel understood the need to integrate the

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<sup>153</sup> Lind, "The Theory and Practice of Maneuver Warfare," Op. Cit.

<sup>154</sup> The reader will note that my characterization of the effects of underdevelopment on military effectiveness in Chapter 5 is drawn in part from this conception of the requirements of good mechanized operations.

various combat arms, but simply could not grasp how to do so

The discussion of the Arab educational system in Chapter 12 revealed that because of the stigma attached to manual labor, technical education in the Arab world suffered, which undoubtedly was an important element in the dearth of technical skills Arab personnel brought to their militaries. Likewise, Arab schools generally failed to teach students to see connections and interactions among different disciplines. This almost certainly hindered the integration of combat arms--the military version of an interdisciplinary subject. The Jordan case presented in this chapter noted that while Jordanian technical skills improved somewhat as a result of socio-economic improvements, the increases were modest, suggesting that another factor, such as culture, was also at work.

Finally, the comparisons among the various non-Arab cases and between the Arab cases and the non-Arab cases revealed very significant differences even in these patterns of military effectiveness. Not all Third World countries suffered from all of these problems, and not all that did so suffered from them to the same extent. North Korea and Cuba demonstrated excellent combined arms skills, and China appeared reasonably good in this category as well. The Argentines, Chinese, North Koreans, and Cubans were all good at artillery operations. Both the Iranians and many of the Arab states demonstrated high quality combat engineering, while Iraq, Egypt, and Cuba all did very well in the realm of logistics. Cuba even did well when it came to maintenance and repair. These results suggest that while underdevelopment does hinder Third World countries in conducting mechanized warfare, there are other factors at work as well that may exacerbate or alleviate the problems caused by underdevelopment. In the case of the Arabs, some of the patterns of behavior characteristic of the dominant Arab culture served to compound the problems created by underdevelopment. For these reasons, Arab military forces conducted mechanized warfare operations very badly, often worse than otherwise more backward nations.

### **Maneuver Warfare and Arab Warfare**

It is certainly the case that all underdeveloped states have difficulty with mechanized warfare, but it is not the case that all underdeveloped states have difficulty with maneuver warfare. Some, like China, Chad, Cuba, Somalia, North Korea and North Vietnam were very good at it. Others, like the Arabs, were not. Thus one cannot explain this inability by recourse to underdevelopment.

Instead, the source of this inability to conduct effective maneuver warfare operations lies in the influence of elements of the dominant Arab culture. Simply stated, certain Arab cultural patterns left Arab junior officers ill-equipped to handle the responsibilities demanded of them in maneuver warfare. The performance of tactical commanders is the crucial element of effective maneuver warfare, and the skills that tactical commanders are required to manifest are precisely those which Arab cultural patterns discourage among subordinates in a hierarchy. It is crucial for junior officers to show initiative, flexibility, independence, improvisation, and a constant accurate transmission of information. However, certain patterns of behavior characteristic of the dominant Arab culture encourage exactly the opposite behavior in young Arab men. Consequently, when these men are placed in the chaos of combat, they act as they have been taught all their lives by their families, their teachers, their peers, and even their drill instructors, which is not in the manner best suited for effective maneuver warfare.

For this reason, any time during the period 1945-1991 that an Arab military faced a foe who could conduct maneuver warfare well, they fared poorly. Of course, one could also argue that whenever the Arabs faced a foe who could conduct mechanized warfare well they fared poorly. True enough, but it is also the case that whenever the Arabs faced a foe who could perform maneuver warfare well but could not perform mechanized warfare (because of lack of expertise or lack of equipment) they still fared extremely poorly and for the same reasons. Iraq during the Iran-Iraq War, the Arab states during the

Arab-Israeli war of 1948, Egypt against Israel in 1956, Egypt against the Yemeni Royalists, Iraq against the Kurds, and Libya against Chad, all fought opponents far less mechanized than themselves, but the Arabs fared no better than in those wars in which they fought enemies with the most sophisticated arsenals and the know-how to use them. Was Iraqi performance against (essentially) non-mechanized Iran during the Iran-Iraq War somehow better than its performance against the heavily-mechanized United States during the Gulf War? Was Syrian performance in 1982 (when Israel's arsenal completely outclassed its own) somehow better than its performance in 1948 (when Israel's arsenal was completely outclassed by its own)? The answer is no. No matter how mechanized or non-mechanized the foe, the Arabs performed poorly.

The only real differences in Arab fortunes occurred as a result of variations in the ability of the foe to conduct maneuver warfare. Thus, when a foe was non-mechanized and equally bad at maneuver warfare, such as the Iraqi Kurds, the Arabs might prevail barely. On the other hand, when the foe was non-mechanized but very good at maneuver warfare, such as the Chadians or the Israelis early on, the Arabs lost badly. Finally, when the foe was non-mechanized and equal or only slightly better than the Arabs in maneuver warfare but other circumstances compensated for this skill, the Arabs also might eke out a narrow victory of sorts. Iran probably was the best example of this. Iran was somewhat better than Iraq in maneuver warfare. This superiority was amply demonstrated from 1981 to 1984 when Iranian forces regularly outmaneuvered and smashed larger, more heavily-mechanized Iraqi formations. However, as the war dragged on, Iranian logistical problems and the mullahs' insistence on squandering Iranian manpower in human wave attacks grew so great that they more than compensated for Iran's slight advantage in maneuver capability. In the end, the Iraqi General Staff was able to fake a very limited maneuver warfare capability and defeat a virtually impotent Iranian army.

### **The Interrelationship of Culture and Economics**

As a final point on the question of Arab culture and underdevelopment, it is good to remember that culture and socio-economic development are not nearly as distinct as I have drawn them to be in this study. Because the crude methods currently available to social science make it difficult to handle complex interrelationships among different human motivations, I have treated culture and socio-economic development as separate entities. However, in reality this is not the case. In reality, there is considerable interplay between these factors. Indeed, socio-economic development influences cultural patterns and cultural patterns influence socio-economic development.

A culture is a set of established values and prescriptions regarding human behavior developed by a society over time. These patterns develop in response to the constantly changing situation of the society. Economics is a critical aspect of these changes. Over time, a society's economic system may change as a result of demographics, climatological change, shifting trade patterns, migration, war, invention, or a host of other reasons. When the economic system changes, culture will change too. The society's culture will change to provide for the needs of the new economic system. Values that once were paramount may lose their cachet if they conflict with the incentives of the new economic system. Other values which the new economic system rewards may grow in importance. All of this takes time, because it is the nature--indeed, the purpose--of culture to withstand change.

By the same token, culture is a critical element shaping economic development. An economic system does not arrive like Athena, full-blown from the mind of a single man. Rather it grows over time in a complex, ultimately random, series of steps. There is no set course for those steps and thus there is plenty of room for cultural influences to shape this development. Perhaps the best example of this can be seen in the spread of an economic system from one country to another. The industrial economy, for example, began in England and then spread to the continent and America, later to East Asia, and

perhaps in the future to the rest of the world. In none of these countries was the course of industrialization identical to that of any of the other countries. Instead, industrialization in each country was itself shaped by the existing culture as well as the unique circumstances of its development in each. Thus the Japanese economy continues to bear the unmistakable stamp of Japanese culture as it existed before industrialization. There are aspects of Japanese culture that have changed, and aspects that have stayed the same, just as there are aspects of the Japanese economy that look very similar to that of other industrial economies, and other aspects that are uniquely Japanese.<sup>155</sup>

Many anthropologists and sociologists, as well as some of the more recent work on modernization theory, have gone so far as to argue that a society's culture can have a very important, perhaps even a decisive influence on the development of the society's economy.<sup>156</sup> For instance, at the end of their book *Becoming Modern*, Alex Inkeles and David Smith conclude that culture is a critical aspect in determining the timing, pace, and course of industrialization. They go so far as to speculate that some cultural patterns may actually delay or even prevent industrialization. With regard to the failure of industrialization to take root in certain societies, they write:

In the explanations which are offered for this situation, one hears again and again the echo of one basic refrain: 'The people were not ready for it yet.' When one probes the generalization, it quickly becomes apparent that the material resources, the manuals for repair and maintenance, the charts and tables for organization, the guidelines for administration which accompanied the transplanted institutions were meaningless without the support of an underlying and widespread pattern of culture and personality which could breathe life into these otherwise sterile forms and give human meaning and continuity to their activity.<sup>157</sup>

This discussion makes clear that culture and socio-economic development are not distinct influences, but highly interrelated ones. The economic influences on individual behavior are, indirectly, cultural influences as well. Similarly, the cultural influences on human behavior are, indirectly, economic influences as well. Thus it is important to remember when discussing the relative merits of cultural vs. economic explanations for military effectiveness, that the two are closely intertwined and perhaps inseparable.

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<sup>155</sup> Perhaps the best description of the differences and similarities of the industrialization of two countries is Ronald P. Dore, *British Factory, Japanese Factory: The Origins, of National Diversity in Industrial Relations*, (Berkeley, Ca: University of California Press, 1973).

<sup>156</sup> For arguments along these lines from the anthropological and sociological fields, see Clifford Geertz, *The Interpretation of Cultures*, (NY: Basic Books, 1973), esp. p. 93; Bassam Tibi, "The Interplay Between Social and Cultural Change: The Case of Germany and the Arab Middle East," in George N. Atiyeh and Ibrahim M. Oweiss, *Arab Civilization: Challenges and Responses*, (Albany, NY: SUNY Press, 1988), pp. 168-171; Bassam Tibi, *Islam and the Cultural Accommodation of Change*, Translated by Clare Krojzl, (Boulder, Colo: Westview, 1991), pp. 52-53. For a review of the work in the modernization school, see Ali Banuazizi, "Social-Psychological Approaches to Political Development," in Myron Weiner and Samuel P. Huntington eds., *Understanding Political Development*, (Boston: Little, Brown and Co., 1987), esp. pp. 299-300.

<sup>157</sup> Alex H. Inkeles and David H. Smith, *Becoming Modern: Individual Change in Six Developing Countries*, (Cambridge, Mass: Harvard University Press, 1974), p. 314.

## **Chapter 17**

### **Conclusions and Afterthoughts**

The results of this study demonstrate that certain patterns of behavior fostered by the dominant Arab culture were the most important factors contributing to the limited military effectiveness of Arab armies and air forces from 1945 to 1991. Arab military history during that period of time conforms very closely to the predictions of the Arab-culture theory. Not only did variations in Arab military effectiveness correspond with variations in the impact of Arab culture on the militaries in question, but the Arab culture theory is the only potential explanation that can account for this variance. The study demonstrated that the process of education in the Arab world, both informally in the family and formally at school and in the military, works as a causal mechanism tirelessly inculcating the behavioral patterns of the dominant culture into the boys and young men who become soldiers and officers in Arab armies. Finally, in a series of critical tests pitting the Arab-culture theory in direct competition with the three most serious alternative explanations, the Arab-culture theory was found to have greater explanatory power than any of its rivals.

The various patterns of behavior derived from the dominant Arab culture were the most important influences on Arab military effectiveness for several reasons. First, Arab culture had a tremendous influence on the ability of Arab armies to conduct maneuver warfare, and the weakness of Arab militaries in maneuver warfare was the single most detrimental aspect of their poor military performances. Second, Arab culture also had more modest, but still significant, influence on the ability of Arab armies to conduct mechanized warfare, and the weakness of Arab militaries in mechanized warfare was the second most detrimental aspect of their poor military performances. Last, of all the explanations offered for Arab military effectiveness during the postwar era, only the Arab-culture theory could explain the strengths shown by Arab armies in combat.

The patterns of behavior characteristic of the dominant Arab culture found to have the greatest influence on Arab military effectiveness were those that favored a centralization of authority within any hierarchy; those that discouraged initiative, flexibility, improvisation and independence among subordinates in a hierarchy; those that encouraged manipulation of information to suit individual preferences; those that encouraged individuals to see knowledge as discreet, compartmented entities; and those that discouraged individuals from undertaking manual labor or learning technical skills. These various patterns hindered Arab militaries from effectively conducting maneuver warfare because they diminished the ability of Arab junior officers to shoulder the leadership burden in combat effectively and impeded the flow of accurate information throughout the command structure. Likewise, these patterns also had an effect on the ability of Arab armies to conduct mechanized warfare because they hindered the integration of the various combat arms into effective combined arms teams, diminished the prevalence and extent of technical skills in Arab armed forces, and helped create a general unfamiliarity with machinery among Arab soldiery.

On the other hand, other patterns of behavior characteristic of the dominant Arab culture appeared to aid Arab military effectiveness to a certain extent. Those cultural traits which stressed strict obedience to higher authority, personal courage and self-sacrifice, as well as those that created bonds of great loyalty among Arab friends and

kinsmen led to a good ability to conduct well-rehearsed, set-piece operations; considerable acts of bravery and self-sacrifice among Arab soldiers and officers; as well as tremendous unit cohesion. These talents helped to make Arab armies very formidable when conducting static defensive operations. Unfortunately for the Arab armies, these advantages were not enough to compensate for the problems created in waging maneuver and mechanized warfare by the other traits of the dominant Arab culture.

Although Arab culture was the most important cause of Arab military ineffectiveness from 1945 to 1991, it was hardly the only cause. Poverty and socio-economic backwardness appear to have had the next most influence on the performance of Arab armies and air forces. Societies that have not undergone an industrial transformation appear to have great difficulty making war with the weaponry of the industrial world. Because soldiers and officers from underdeveloped societies are unaccustomed to working with machinery they have tremendous difficulty conducting mechanized warfare in the manner of the industrialized nations. The inability of Arab armies to wage mechanized warfare was second only to their difficulties in waging maneuver warfare in its importance to their poor showings in combat between 1945 and 1991, and underdevelopment seemed to explain the greatest amount of the variance in this area, with Arab-culture a secondary influence. Consequently, underdevelopment was revealed to be the second most important cause of Arab military ineffectiveness after the patterns of behavior derived from the dominant Arab culture.

After underdevelopment, problems arising from the commissarist politicization of Arab militaries had the next greatest influence on Arab military effectiveness. This study demonstrated that commissarism was the best explanation for poor Arab generalship. Although poor generalship was not a constant in recent Arab military history, it was a frequent element in their military failings. When Arab generals were incompetent they usually had a very significant negative impact on the overall war effort, and because this incompetence was mostly the product of commissarist politicization, commissarism must be considered another significant influence on Arab military effectiveness. In addition, commissarism was found to have a lesser impact upon the ability of Arab armies to conduct maneuver warfare. Commissarism encourages many of the same behavioral patterns as Arab culture, although its influence is more modest at junior officer levels than at senior echelons. Nevertheless, because an inability to conduct maneuver warfare was such a crucial aspect of Arab military ineffectiveness, even the more modest influence of commissarism in this area must still be considered significant.

Although praetorian politicization of Arab militaries had a considerable influence on issues of war and peace in the Middle East, its impact on the narrower issue of Arab military effectiveness was minor. There is no question that the praetorian distractions of the Iraqi, Syrian, and Egyptian officer corps during the 1950s and 1960s was harmful to military effectiveness. However, this influence paled beside that of Arab culture, underdevelopment, and commissarism. This was demonstrated by the absence of any real improvement in Arab military effectiveness after praetorianism gave way to commissarism in the late 1960s and early 1970s.

The same can be said for palace-guardist politicization of Arab militaries. There can be little doubt that, especially in the first decade or so after the Second World War, the focus of Arab armed forces on internal security hindered their performance in combat against foreign armies. Nevertheless, the fact that Arab military ineffectiveness persisted unabated long after the Arab armies had devoted themselves whole-heartedly to preparing for wars against foreign powers demonstrates that palace-guardism's impact was slight. Like praetorianism, it almost certainly exerted some influence, but this influence was minor compared to that of Arab culture, underdevelopment, and commissarism.

Finally, the reliance on a Soviet model of military operations by several Arab states had some influence, but essentially only in a positive manner. Rather than undermining Arab military effectiveness, the Soviet influence appeared to aid Arab armed forces. In particular, the Egyptians and possibly the Iraqis appear to have learned

from the Soviets how to plan and conduct large, complex offensive operations without having to rely on the talents of an aggressive, capable corps of junior officers. The Soviet influence appeared as a clear detriment only in air-to-air operations, and even here it was not as important as the problems derived from Arab culture, underdevelopment, and commissarism. Consequently, the Russians cannot be blamed for Arab military ineffectiveness.

### **Culture and Arab Military Effectiveness: the Past**

One obvious question springing from these conclusions is how well they fit patterns of Arab military effectiveness in the past. In particular, from the 7th century until about the 11th century, the Arabs constituted an extremely formidable military power. Arab armies under the banners of Islam conquered the entire southern Mediterranean coast, the Middle East, and much of South and East Asia. To what extent do the conclusions of this study of recent Arab military effectiveness shed light on the conquests of that earlier era of Arab martial prowess?

Unfortunately, the answer is "not very much." The reason is that everything was different at the time of the Islamic conquests. First of all, warfare was very different at that point in time. Combat during the Middle Ages bore little resemblance to the combat of the 20th Century. Consequently, the skills that led to success in battle at the time of the Islamic conquests were very different from the skills needed to succeed in battle after World War II. There can be little comparison between armies of scimitar-wielding horsemen and armies of tanks, jet fighters, and long-range artillery. Likewise, Arab culture also was very different. No culture is changeless, and no matter how much Arab culture may have calcified after the sack of Baghdad and the Ottoman conquest, it is absurd to suggest that Arab culture was the same in the 20th Century as it was in the 7th Century. Moreover, the early Arab-Islamic armies which conquered the southern Mediterranean were largely composed of nomadic Arabian and Yemeni tribesmen, rather than Levantine, Nilotic or Mesopotamian city-dwellers. Consequently, the cultural background of the Arab-Islamic soldiers was different from the dominant urban culture of even that period. Indeed, the great Arab historian of the 14th Century, Ibn Khaldun commented extensively in his *Muqaddimah* on the cultural differences between the Bedouin tribesmen and the town-dwellers and why the Bedouin culture made the Arab armies such formidable military forces.<sup>1</sup>

Thus both Arab culture and warfare itself were very different during the period of the Islamic conquests. The findings of this study would suggest that the Arab culture (or more properly, the Bedouin Arab culture) of that period almost certainly influenced the military effectiveness of the Arab armies of that period, just as Ibn Khaldun observed. However, just what that effect might have been is not something this study can address because of the enormous differences in Arab culture and warfare from the 7th to the 20th centuries.<sup>2</sup>

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<sup>1</sup> See, Ibn Khaldun, *The Muqaddimah: An Introduction to the Study of History*, translated by Franz Rosenthal, (Princeton, NJ: Princeton University Press, 1980), Volume 1, Chapter 2, "Bedouin Civilization," and Volume 2, Chapter X, "Wars and the Methods of War Practiced by Various Civilizations." Also see, Albert Hourani, *A History of the Arab Peoples*, (Cambridge, Mass: Belknap Press, 1991), esp. pp. 23-63.

<sup>2</sup> While it is beyond the scope of this study, many authors have noted that there is a precipitous decline in Arab military effectiveness soon after the start of the ossification of Arab-Islamic culture in the 11th and 12th Centuries. For instance, see Jacques Berque, *Arab Rebirth: Pain and Ecstasy*, Translated by Quintin Hoare, (London: Al Saqi Books, 1983), pp. 30-31; Hani A. Faris, "Constantine K. Zurayk: Advocate of Rationalism in Modern Arab Thought," in George N. Atiyeh and Ibrahim M. Oweiss, *Arab Civilization: Challenges and Responses*, (Albany, NY: SUNY Press, 1988), p. 8; David C. Rapoport, "The Praetorian Army: Insecurity, Venality, and Impotence," in Roman Kolkowicz and Andrej Korbonski eds., *Soldiers, Peasants and Bureaucrats: Civil-Military Relations in Communist and Modernizing Societies*, (London:

### **Culture and Arab Military Effectiveness: the Future**

A second logical question is what do the conclusions of this study have to say about Arab military effectiveness in the future? In particular, it is worth asking whether the conclusions suggest that the Arabs are doomed to go on losing wars forever. Here the answer is a definitive "no."

If Arab militaries continue on in their current practices they are unlikely to improve their military effectiveness in the near future; however, there are alternatives. Chapter 13 of this study presented three different methods by which Arab armed forces enjoyed increased military effectiveness during the period 1945 to 1991. These included limiting military operations to carefully circumscribed set-piece operations that were meticulously planned and exhaustively rehearsed beforehand; reliance on small elite forces; and the creation of a military culture distinct from that of the dominant Arab culture. All of these can be seen as potential "solutions" which Arab armed forces could employ to improve their military effectiveness in the short-term.

The first two "solutions" appear to offer only very modest improvements to Arab military fortunes. By relying on limited, set-piece operations the Egyptians, Iraqis and Syrians were able to get only slightly better results out of their armed forces than usual. This is because the problem of Clausewitzian friction inevitably caught up with them and ruined their beautifully scripted operations, at which point their entire campaign fell apart. Moreover, because of the fragility of this method, Arab militaries were able to employ it for only a very narrow set of military operations. On the other hand, because of their greater flexibility and reactivity, small elite forces had a much greater capacity to deal with friction, and could be used in a far greater number of situations. However, the problem with elite forces was that to retain these capabilities they had to be kept small. On a unit-for-unit basis, Syrian commandos had greater combat effectiveness than Iraqi Republican Guards, but because of the trade-off between size and competence, neither represented a major increase in the overall military power of their country. The Syrian commandos had to be kept so small to gain their increased military effectiveness that in terms of actual military power, they probably contributed no more (and possibly substantially less) to overall Syrian military power than did the larger, but less competent Iraqi Republican Guard to Iraqi military power.

On the other hand, the creation of a distinct military sub-culture appears far more promising. As the Jordanian example demonstrated, to the extent that an Arab military can develop a different sub-culture from that of the larger society it can gain a much more substantial increase in its military effectiveness because its personnel will not be subject to those behavioral patterns associated with the dominant culture that have proven problematic for military effectiveness in the past. As the Jordanians showed in 1948, such a military is capable of very competent military operations--probably more so than even the small elite formations--and, in theory, can be as large or as small as the nation requires. (Although the smaller the size and the longer the terms of service, the easier such a process will be).

The results of Chapter 12 also support this contention. Since these behavioral patterns are transmitted to the individual through education, and it appears entirely plausible that a different educational method will produce different behavioral patterns, the key to this approach is training. It suggests that if Arab armed forces drastically revamp their training methods they can essentially create a new culture distinct from that of the larger Arab society. Obviously, this is not going to be easy because such training will have to reshape the minds of men shaped by years of education and family upbringing, but it can be done. Moreover, it suggests that to the extent that Arab states are willing to reform their general educational methods, the task of military training will be made easier and military effectiveness is likely to improve. Of course, reforming a

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George Allen and Unwin, 1982), p. 269; Joseph S. Syliowicz, *Education and Modernization in the Middle East*, (Ithaca, NY: Cornell University Press, 1973), pp. 51-57, 71, 93.



nation's education system is a tall order, and it may simply be easier to concentrate on revamping military training methods instead. Nevertheless, the point remains that education is clearly the key to behavioral patterns and by changing Arab educational practices in the schools and/or in the military, Arab armed forces should be able to eradicate the problems created by culturally-regular behavioral patterns for military effectiveness.

The earlier discussion of Arab military effectiveness in the Middle Ages brings up another important point about Arab military effectiveness in the future. The short term remedies for Arab military ineffectiveness aside, over the long-term there is no reason why the Arabs necessarily must continue in this state of military impotence. In the long-run, both Arab culture and warfare will change. Arab culture may change in such a way that Arab personnel will be much better equipped to handle combat operations than is now the case. Warfare may change in such a way that the cultural patterns of the Arab world will become the ideal. Either way, these changes will breed new interactions which may or may not perpetuate their military weakness.

At this point in time, it is just too early to tell in which direction this interaction will develop. For example, in the Arab world there are both trends toward a "liberalization" of Arab culture as well as trends toward a return to the ways of the deeper past. Likewise, it is unclear which way the "military-technical revolution" will develop. On the one hand, the greater sophistication of weapons systems suggests the need for greater technical skills, decentralization of authority, and effective information management. On the other hand, the proliferation of stand-off "smart" weapons and advanced command, control, communications and intelligence systems may reduce the need for any real technical expertise among military operators, and may make it easier and more efficient to centralize combat operations. Thus there is no reason to believe that the current situation, bred from the interaction of a particular cultural pattern and a particular form of war-making will continue on into the distant future given that both are likely to change.

### **Culture and Military Effectiveness: A Broader Perspective**

In his account of the Arab-Israeli Wars, the military historian Trevor Dupuy observed that, "The extent to which national forces consistently perform at a certain degree of effectiveness is a subject that calls for serious analysis."<sup>3</sup> This study has been an effort to heed Dupuy's call and to at least begin to delve into this broader issue. To some extent, it has been successful in that effort. In addition to illuminating the role of cultural patterns on the specific issue of the military balance in the Middle East, this study also sheds some light on the question of the influence of cultures on military effectiveness more generally.

In a certain sense, this work can be seen as a single case-study addressing the broad parameters governing culture's impact on military effectiveness. It strongly suggests that cultural patterns of behavior can have a considerable impact on military effectiveness. Of course, it may be the case that the effect of Arab culture on Arab military effectiveness represents the extreme end of the scale. Many casual observers and participants in the Middle East wars of recent history have commented that Arab culture was a powerful influence on Arab military effectiveness. One finds far fewer remarks from experts regarding cultural influences in other wars. This implies that Arab culture may have considerably greater influence on Arab military forces than other cultures have had on their militaries. Alternatively, it may simply be that Arab culture had an unusually negative impact on military effectiveness and it was this aspect that drew attention. Other cultures may have a greater or lesser impact on their militaries, and that impact may be more positive or more negative. Nevertheless, there can be no doubt that

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<sup>3</sup> Col. Trevor N. Dupuy, *Elusive Victory*, Third Edition--Paperback Edition, (Dubuque, IA: Kendall Hunt, 1992), p. 335.

behavior derived from culture has some impact on every military.

Moreover, this study also has brought out the role of differing levels of socio-economic development on military effectiveness generally. While many military officers and commentators have voiced the opinion that "Third World armies just can't fight," there has been little real effort to demonstrate that this is truly the case.<sup>4</sup> In addition, there has been little attention given to exactly what the effects of differing levels of socio-economic development are on the ability of a society to wage war in the modern world. This study has at least made a start on this path. It has demonstrated that underdevelopment does play an important role in limiting the military effectiveness of Third World armies and air forces. Moreover, it has shown that the critical problem created by socio-economic backwardness is that it prevents the militaries of less advanced societies from employing the war-making tools of the more advanced societies.

Finally, this study points out the need for Western military analysts, and particularly American military analysts to pay greater heed to culture, and other societal factors when attempting to understand the military capabilities of another country. It is a peculiarly American cultural trait that we dogmatically refuse to accept the importance of culture as an influence on behavior. Only Americans could assume that all men and women are purely rational beings upon whom societal values have only minor influence. For this reason, Americans have tended to dismiss culture as a potential influence on military effectiveness. We assume that any given state will conduct its military operations in exactly the same fashion as we would because we assert that our own behavior--at least in military operations--are governed entirely purely by reason and the objective conditions of our situation, but not by cultural values. As a result, we consistently misread the capabilities and intentions of foreign powers and are baffled when they consistently conduct military operations better, worse, or just different from our own. The absurd overestimation of Iraqi military capabilities prior to the Persian Gulf War was only the most egregious example of this behavior. In his landmark study of Cuban military history, Rafael Fermoselle also bemoaned this problem:

Scholars and analysts in the United States that have devoted a considerable amount of time researching different aspects of Cuba, including the Cuban military, sometimes misinterpret their findings. This occurs because they often fail to take into account Cuban culture or interpret their findings on the bases of a US mentality. Despite many similarities, Cubans do not think like people in the United States.<sup>5</sup>

Incorporating cultural influences in military assessments is not easy, but it is important. Indeed, this study has demonstrated that for certain countries or regions of the world, incorporating cultural effects is crucial. The best analysts do it instinctively, but it is ridiculous to assume that we will have such men and women in the right places to make the right judgments when it is vital to do so. Consequently, it is of considerable importance to begin to try to tackle how best to include cultural influences in military analysis so that this becomes a universal phenomenon, just as the influence of culture on military effectiveness is.

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<sup>4</sup> Perhaps the only work to address this topic directly is Anthony Pascal, "Are Third World Armies Third Rate? Human Capital and Organizational Impediments to Military Effectiveness," RAND Paper-6433, (Santa Monica, Ca: The RAND Corporation, January 1980).

<sup>5</sup> Rafael Fermoselle, *The Evolution of the Cuban Military, 1492-1986*, (Miami, Fla: Ediciones Universal, 1987), p. 4.

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